BEYOND THE HEADLINEs 2024-25

EVOLVING RELATIONSHIP BETWEEN MEDIA & WAR

the Reality behind the tragic disappearance of tigers in Ranthambore

DEEP SEEK AI A SHIFT IN GLOBAL POWER DYNAMICS

SPORTS SCIENCE

The Mindful Champion: Gukesh

Mahakumbh to Arthkumbh

Palestine-Israel Conflict

Weaponization of Technology

EXPERT COMMENTARY ON INDIA'S TOP TEN NEWS

Edited by
Dr. Shachi Negi

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Published by: JagritiMedia.com

Jagriti Media continues to redefine digital journalism with impactful storytelling and on-ground reporting. In 2024-25, it took pride in publishing exclusive and inspiring stories from the 38th National Games of Uttarakhand, capturing not just the sports but the spirit, struggles, and triumphs of athletes through powerful, human-centric narratives.

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PREFACE

In an era marked by information overload, fleeting headlines, and surface-level narratives, *Beyond the Headlines 2024–25* dares to pause, reflect, and dive deeper. This anthology is a curated attempt to examine the year's most significant events, not just for what happened, but for why it matters and how it connects to broader socio-political, technological, and cultural transformations.

Building on the overwhelming response to *Beyond the Headlines 2023–24*, which was celebrated for its sharp insights and layered storytelling, this year's volume continues our mission to go beyond the noise. It reaffirmed our belief that readers are seeking not just information, but interpretation-narratives that make sense of a fast-changing world.

From *Operation Sindoor*, which marked a turning point in the evolving relationship between media, war, and public perception, to the intricate sports science behind the 38th National Games, each chapter offers a multidimensional lens. The *Mahakumbh* emerges as more than a spiritual gathering, it's a living confluence of faith, finance, logistics, and cultural diplomacy.

The quiet strength behind Gukesh's historic chess win is also explored, not only as a sporting milestone but as a symbol of focus, mental discipline, and the growing role of meditation in peak performance. Election 2024 is read not merely as a political event, but as a mirror to shifting citizen engagement, digital influence, and the contested space of public narrative.

The rise of Deep Seek AI signals a shift in global power dynamics, reminding us that technology is not neutral- it is a narrative in itself. We have tried to ensure that each contribution brings together scholarly insight with a human touch. From the reality behind the tragic disappearance of tigers in Ranthambore to the digital spectacle of the Ambani wedding, the emotional response to Sir Ratan Tata's passing, and the weaponization of technology in the Palestine-Israel conflict, this volume engages with events as layered stories that shape our collective consciousness.

What binds these diverse narratives is a commitment to uncovering meaning in moments that often go unnoticed once the breaking news fades. **This book is not merely a documentation of the top ten news stories around the year, but it is a reflection of who we are becoming**.

My heartfelt thanks to all contributors, experts, and thinkers who lent their voices to this project. **May this collection inspire deeper thought, critical inquiry, and an appreciation for the layered reality behind the headlines!**

Dr. Shachi Negi
Editor, Beyond The Headlines

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OPERATION SINDOOR – A MEDIA WAR IN THE AGE OF ALGORITHMS

In May 2025, India launched Operation Sindoor, a swift and strategic military response to rising cross-border hostilities. While official details remained limited, the operation created shockwaves across both geopolitical and digital landscapes. It wasn't just a matter of national security, it became a national spectacle.

Amid this media storm, Operation Sindoor achieved its strategic goal while highlighting a deeper truth: modern war is no longer fought just on borders, it's fought on screens. The viewer isn't just a passive consumer anymore; they are part of the unfolding theatre.

As Hindustan Times editorialized, "It's time for media and audiences alike to balance passion with responsibility."

From Kargil to Operation Sindoor: How Media, War & Viewers Have Evolved

By Dr. Shachi Negi, Editor

War became a spectacle in the dim glow of television sets in the early 1990s. It was during the Gulf War of 1990-91 that the world first saw a conflict unfold in real-time from hotel balconies and battlefield briefings, with CNN's round-the-clock coverage marking a new era in global journalism. This was not just about bombs and tanks but it was about broadcasting, spectacle, and access. In India, the timing couldn't have been more significant. Just a year later, cable television arrived, forever transforming the way Indians received news. Suddenly, war and politics weren't distant matters. They were brought into middle-class living rooms, narrated with urgency, and framed with patriotic fervor.

By the late 1990s, India found itself at the heart of a real war: Kargil. The conflict in the rugged heights of Kashmir was not only a military operation; it was a turning point for Indian journalism also. With no social media to amplify or verify narratives, it was television that shaped public perception. Cameras captured frozen battlefields, interviews with soldiers, and emotional messages from families. The coverage generated a shared national sentiment and significantly boosted viewership. Scholars such as Nalin Mehta (2008) have argued that this moment helped transform Indian TV news into an "emotive and visual" force capable of driving nationalistic discourse. Unlike the controlled Doordarshan narratives of earlier decades, private news channels now had the agency and the audience to dramatize war with immediacy.

A few years later, the December 2001 Parliament attack further propelled the transformation of Indian media. The visual drama of police cordons, breaking news tickers, and security briefings dominated screens for days. Television channels competed for speed and scale, sometimes at the cost of nuance. The news was no longer just about facts—it had to evoke emotion. Scholars like Robin Jeffrey and Assa Doron (2013) have pointed out that television news in India increasingly began to operate like entertainment, adapting techniques from cinema to dramatize national crises.

Over the next two decades, technological shifts were relentless. With the advent of smartphones and affordable internet, especially after 2016, the Jio revolution in India, the locus of news shifted again. This time from the living room wall to the palm. By 2022, over 467 million Indians were consuming digital news (IAMAI-Kantar Report, 2023). Algorithms began to influence what viewers saw, how often,

and from which ideological lens. News became bite-sized, visual-heavy, and hyper-personalized. War reporting, too, was not spared. Now, anyone with a camera could broadcast conflict or what they claimed was conflict. Verified facts increasingly competed with viral misinformation.

When India launched Operation Sindoor in May 2024, a series of swift retaliatory strikes against a neighboring state's terror infrastructure, it was not just the army that was mobilized. Within minutes, hashtags (#) began trending, memes flooded in WhatsApp groups, and satellite images were dissected by anonymous handles. News anchors raced to update studio graphics while social media influencers went live with patriotic commentary. In this cacophony, facts often blurred into theatre.

A recent report by the Reuters Institute for the Study of Journalism (2024) noted that 61% of Indian respondents encountered war-related misinformation online during major national events. Platforms like X (formerly Twitter), Instagram, and YouTube are now as central to a military operation's public perception as the battlefield itself. The viewer, not the editor, has become the algorithm's master. The sentiment of a neighborhood uncle casually commenting, *Bahut ho gaya... hona chahiye*, while watching the news on his phone captures the raw immediacy of today's war coverage, a mix of personal opinion, national emotion, and digital consumption.

Critics argue that the lines between fact and feeling have eroded. Fake news, doctored videos, and AI-generated images all have muddied the waters. Yet, amid this, there remains a powerful truth: the media reflects the society it serves. When viewers demand instant visuals, emotional appeals, and ideological affirmation, the industry responds in kind. The news cycle today is not dictated merely by military briefings or press releases, but by trending clips, viral posts, and real-time analytics.

And so, **in this new media landscape, content is no longer king - the viewer is**. The wars we watch are curated not just by reporters but by data scientists, meme creators, and the collective emotions of a digitally connected populace. From the snowy peaks of Kargil to the algorithmic trenches of Operation Sindoor, the evolution of war reporting in India tells us less about the battlefield and more about the screen through which we view it.

References:

1. Mehta, Nalin. *India on Television: How Satellite News Channels Have Changed the Way We Think and Act*. HarperCollins, 2008.
2. Jeffrey, Robin & Doron, Assa. *The Great Indian Phone Book: How Cheap Mobile Phones Change Business, Politics and Daily Life*. Harvard University Press, 2013.
3. IAMAI-Kantar. *India Internet Report 2023*.
4. Reuters Institute. *Digital News Report – India*. 2024.
5. "Operation Sindoor: India's Strategic Strike Timeline." *The Hindu*, May 2024.
6. "How Television Changed India's View of War." *Scroll.in*, July 2019.

38TH NATIONAL GAMES IN UTTARAKHAND
A LANDMARK SPORTING EVENT

In early 2025, Uttarakhand hosted the 38th National Games of India, a historic event featuring over 10,000 athletes across 35 sports in eight districts. Dehradun's Rajiv Gandhi International Cricket Stadium was the main venue, with Haldwani and Tehri also hosting key events. Traditional sports like Mallakhamb and Kalaripayattu stood alongside athletics and swimming. Prime Minister Modi inaugurated the games, expressing India's Olympic aspirations for 2036. The closing ceremony in Haldwani saw Home Minister Amit Shah felicitate Services, Maharashtra, and Haryana. Mascot Mouli, inspired by the Himalayan Monal, reflected Uttarakhand's rich culture and the state's emergence as a sports tourism hub.

Mechanics of Games:
How Science Enhances Achievements in Sports

By Dr. Anilendu Pramanik, Assistant Professor at GNDU

The relentless pursuit of sporting excellence is deeply intertwined with scientific understanding. Gone are the days when raw talent and sheer determination were the sole determinants of victory. Today, applying scientific principles, particularly those encompassing mechanics, physiology, biomechanics, and psychology, has revolutionized sports, enhancing training methodologies, equipment design, performance analysis, and even injury prevention. This essay will explore the intricate mechanics of games, focusing on how scientific advancements have propelled athletes to achieve unprecedented levels of performance and pushed the boundaries of human potential in various sporting disciplines.

One of the most significant contributions of science to sports lies in the field of **biomechanics**. Biomechanics applies the principles of mechanics to the study of living organisms, analyzing motion and force within biological systems. By understanding the biomechanical principles governing movement, athletes and coaches can optimize technique, improve efficiency, and reduce the risk of injury. For instance, consider the evolution of the high jump. Dick Fosbury's revolutionary "Fosbury Flop," a technique involving a backward approach and head-first clearance of the bar, was initially met with skepticism. However, biomechanical analysis revealed its superiority. The Fosbury Flop minimizes the athlete's center of gravity at the peak of the jump, allowing for a higher clearance of the bar compared to traditional straddle techniques (Hay, 1993). This understanding led to its widespread adoption and dominance in the high jump event.

Similarly, biomechanics plays a critical role in understanding and improving running mechanics. Researchers analyze stride length, stride frequency, ground contact time, and joint angles to identify inefficiencies and potential areas for improvement. For example, studies have shown that elite runners often exhibit shorter ground contact times and a more efficient use of elastic energy stored in the tendons and muscles of the lower limbs (Weyand et al., 2000). This knowledge is then translated into targeted training programs focusing on plyometrics and running drills to enhance leg stiffness and improve running economy. The use of advanced technologies like force plates and motion capture systems allows for precise measurement and analysis of these parameters, providing valuable feedback to both athletes and coaches.

The application of **fluid mechanics** is also crucial in many sports, particularly those involving movement through water or air. Understanding drag and lift forces allows for the optimization of body position, equipment design, and overall performance. In swimming, for instance, researchers have used computational fluid dynamics (CFD) to analyze the flow of water around the swimmer's body, identifying areas of high drag and suggesting modifications to stroke technique and body positioning to minimize resistance (Lyttle et al., 1999). This has led to refinements in swimming strokes, such as the "catch-up" freestyle, which emphasizes maintaining a streamlined body position for a longer period, reducing drag and increasing propulsion.

Furthermore, the design of swimsuits has been significantly impacted by fluid mechanics. The introduction of full-body swimsuits made from low-drag materials caused a significant drop in world records in the late 2000s. These suits reduced skin friction and altered the swimmer's buoyancy, ultimately enhancing performance. However, the controversy surrounding their impact on competition fairness led to their ban by FINA (Fédération Internationale de Natation) in 2010, highlighting the complex interplay between scientific advancement and the ethical considerations in sports.

In cycling, aerodynamics is paramount. The shape of the bicycle frame, helmet, and even the rider's clothing all influence air resistance. Extensive wind tunnel testing is conducted to optimize the aerodynamic profile of cyclists and their equipment. By streamlining the rider's position and using aerodynamically efficient equipment, significant reductions in drag can be achieved, leading to faster times. The pursuit of aerodynamic efficiency has also led to the development of time trial bikes with elongated frames, disc wheels, and aerodynamic helmets, all designed to minimize air resistance and maximize speed.

The principles of **Newtonian mechanics**, specifically the laws of motion, are fundamental to understanding projectile motion in sports like baseball, basketball, and golf. By understanding the forces acting on a ball or object in flight, athletes can optimize their throwing, shooting, or striking techniques. For example, in baseball, the Magnus effect, caused by the spin of the ball, influences its trajectory. A pitcher who can impart spin on the ball can create curveballs, sliders, and other breaking pitches that deceive the batter. Understanding the Magnus effect allows pitchers to control the movement of the ball and increase their effectiveness. Similarly, in golf, understanding the launch angle, ball speed, and spin rate is crucial for maximizing distance and accuracy. Golf clubs are designed to optimize

these parameters, and golfers are trained to swing in a way that produces the desired launch conditions.

Beyond mechanics, **physiological science** plays a crucial role in enhancing athletic performance. Understanding physiological responses to exercise allows coaches to design training programs that optimize fitness, strength, and endurance. For example, understanding the principles of periodization, which involves systematically varying the intensity and volume of training over time, is essential for preventing overtraining and maximizing adaptation. Monitoring physiological parameters such as heart rate, lactate levels, and VO2 max helps coaches to personalize training programs and track athlete progress. Furthermore, advancements in nutrition science have led to a better understanding of the role of diet in optimizing performance and recovery. Athletes now have access to specialized nutrition plans tailored to their specific needs and training goals.

The importance of **psychology** in sports cannot be overstated. Mental toughness, motivation, and focus are crucial for achieving peak performance. Sports psychologists work with athletes to develop strategies for managing stress, improving concentration, and building confidence. Techniques such as visualization, self-talk, and mindfulness are used to enhance mental preparation and improve performance under pressure. Understanding the psychological factors that influence performance can be the difference between winning and losing, especially in high-stakes competitions.

The application of scientific principles to sports has also led to significant advancements in **injury prevention**. Biomechanics is used to analyze movement patterns and identify risk factors for injury. For example, research has shown that athletes with poor landing mechanics are at increased risk of ACL injuries. This understanding has led to the development of training programs that focus on improving landing techniques and strengthening the muscles that support the knee joint. Furthermore, advancements in sports medicine have led to better diagnostic tools and treatment methods for sports-related injuries. This allows athletes to recover more quickly and return to competition sooner.

However, the increasing reliance on science in sports also raises ethical considerations. The use of performance-enhancing drugs is a perennial issue, and the line between legitimate scientific advancements and unethical performance enhancement can be blurry. The development of gene doping, for example, raises serious ethical concerns about fairness and the integrity of competition. It is crucial to ensure that scientific advancements in sports are used responsibly and ethically,

with a focus on promoting athlete health and well-being while maintaining a level playing field.

In conclusion, applying scientific principles, particularly those encompassing mechanics, physiology, biomechanics, and psychology, has profoundly impacted sports. By understanding the biomechanics of movement, optimizing fluid dynamics, applying Newtonian mechanics, harnessing physiological responses, and fostering psychological resilience, athletes are achieving unprecedented levels of performance. While the pursuit of scientific advancements in sports presents ethical challenges, the responsible and ethical application of these principles can continue to enhance training methodologies, equipment design, performance analysis, injury prevention, and ultimately, the achievements of athletes across various sporting disciplines. The future of sports is inextricably linked to the continued exploration and application of scientific knowledge, promising even greater feats of human performance and a deeper understanding of the mechanics that govern games.

References:

- Hay, J. G. (1993). *The biomechanics of sports techniques* (4th ed.). Prentice Hall.
- Lyttle, A. D., Blanksby, B. A., & Anderson, M. (1999). Three-dimensional kinematic analysis of the freestyle swimming stroke: A review. *Journal of Strength and Conditioning Research, 13*(2), 171-178.
- Weyand, P. G., Sternlight, D. B., Bellizzi, M. J., & Wright, S. (2000). Faster top running speeds are achieved with greater ground forces not more rapid leg movements. *Journal of Applied Physiology, 89*(5), 1991-1999.

Role of Sports Sciences in International and National Tournaments

By Rahul Mondal and Anilendu Pramanik
Department of Sports Sciences and Medicine, GNDU

Sports science is defined as the study and application of scientific principles and techniques for optimizing athletic performance (Lippi et al., 2008). Researches have been done on various scientific field e.g. Physiology, biomechanics, anthropometry, nutrition, physiotherapy, ant doping sciences, psychology etc. to make this sports science reliable and valid, where evidence-based practices covering flaws and improve an athlete's quality of life, reduce risk of injury etc. (Millet and Giulianotti, 2019).

Sports science consider as a critical component for an athlete across different sports disciplines by reducing risk of injury, enhancing performance, improving recovery status etc. In a proper periodization plan of an elite athlete before and after the competition has significantly influenced by the sports science where it can optimize athlete's performance for international platforms such as Olympic Games or national events like National games of India.

In 1896 the first modern Olympic Games occurred in Athens among amateur and gentleman athletes but nowadays Olympic athletes are highly trained in specific discipline of sports with a long period of time to compete in the Olympic Games. Which gives us many questions like "How can an athlete maximize their performance for this game where competition is very high?", "How athletes maintain their fitness over a long period of time (like 4 years for an Olympic game)?", "Do the Olympic games place any impact on human health, physical activity, fitness, daily lifestyle etc. on general population?" (Herzog, 2024).

If we talk about Olympic Games, refers as a whole range of human abilities are performed, where magnificent physical, technical, motor skills, and more or less genetics are addressed. The motto of the Olympic Games is "Citius-Altius-Fortius" (i.e., Faster-Higher-Stronger) which indicates that it represents something more than human abilities (Millet et al., 2021). However, an associative team of experts or scientists are always there for an athlete or a team which is not a surprising thing in any national or international platforms of sports (Hodson, 2021). Enhancing performance of an athlete is always be a research question and a curious field in sports science and medicine.

Nassis et al. gave us a practical guideline with 6 recommendations which is essential for an elite Olympian athlete for optimizing their performance. These recommendations are athletes' readiness for competition, preparation for competition and tapering, altitude/hypoxic training, coping with heat during the Olympic Games, new technologies and new equipment, preparation for team sports; coaches and athletes may follow these recommendations for the better performance (Nassis et al., 2024).

Similar to the National games of India, 2025; hosted in Uttarakhand, held across 9 cities. It had a special interest to the sport scientists because it held on a high-altitude area. It demonstrates a growing interest of sports or physical fitness awareness at national level and similarly it reflects the importance of sports science among the athlete population.

This chapter focuses on the importance of the sport science in Paris Olympic 2024 and National games Uttarakhand 2025 and describes key areas like performance enhancement, injury prevention etc.

Role of Sports Science in Paris Olympic 2024:

Olympic is an international platform where all of the elite individuals had come and represented their country. Here sports science is highly focused on the performance enhancement by using their scientific branches. The roles of the scientific branches are described below;

- **Exercise Physiology:**
  Physiology considered as a mother subject for any biological and medical science which represents our inner body's health and our body works. An exercise physiologist represents an athlete's profile by monitoring their cardiovascular health, cardiorespiratory fitness, heart rate variability, metabolic responses etc. After assessing these types of parameters exercise physiologist sets a training frequency & intensity, a proper periodization plan for an elite athlete for the performance enhancement. Various types of equipment (wearable or non-wearable) are used for analyzing the heart rate variability (HRV), VO2max, heart rate maximum (HRmax), lactate threshold etc. which helps to make a training plan (Joyner et al., 2007).
  Physiological monitoring is for the endurance athletes to make strategies for proper hydration and heat adaptation to minimize the environmental heat stress especially for the marathon runners and road cyclist (Casa et. al., 2010).

- **Biomechanics:**
  Biomechanics mainly focuses on the performance analysis by understanding athletes' movement efficacy and technical abilities. High speed cameras, IMU (Inertial Measurement Unit), force platform etc are used for determining their kinetics & kinematics which helps to clarifying athletes' optimal position and movement patterns (Knudson, 2013).
  To represent the real-time motion analysis for sprinters at the Paris Olympics is likely to become beneficial for fine-tuning start aiming as well as optimizing stride length and frequency (Brown et al., 2012). Similar like the sprinters, in swimming under water cameras which are capturing the stroke mechanics, beneficial for the swimmer by improving their hand position and for the greater hydrodynamics the breathing patterns (McCabe et al., 2015).

- **Sports Nutrition:**
  Nutrition defined as a "Fuel" for a human body. Inadequate nutrition affects human health by many ways like inadequate recovery etc.
  In Paris Olympic nutritional strategies mainly focuses on the optimizing performance, faster recovery, maintain hydration, and mainly maintaining the body composition. Because of the individualization the nutritional plan is different from each other because it made by the basis of individual specific needs. In a proper nutritional dietary plan, there are two main components; macronutrients (Carbohydrate, protein & fats), micronutrients (Vitamins, minerals etc.). Along with these two things proper hydration is required (Burke, 2015).
  E.g. Like carbohydrate loading is an essential tool for an endurance athlete (runners or cyclist) on the other hand protein is mainly used for the muscle damage recovery, muscle hypertrophy.

- **Sports Psychology:**
  Psychological preparations like handling the preparticipation anxiety (PCA), stress, etc., mental toughness are the key features of an Olympian athlete which beneficial to get the success. A sports psychologist mainly focuses on the athletes' condition where they are relied, if they are confused or stressed before or during the competition then a psychologist targets to reduce PCA, and increased focus, managing PCA by using many breathing techniques and develops pre-performance routines to stay calm (Weinberg et al, 2023).

Role of sports science in National Games 2025, Uttarakhand:

The 38th National Games of India, held on Uttarakhand at different venues which reflects the awareness of physical fitness and human wellbeing by a national level competition. This represents the athleticism, dedication, and sportsmanship for a future Olympian. For a domestic level athlete sports science mainly help in talent identification, scientific designed training protocols, where recovery strategies are also included and lastly the mental toughness and many more.

- **Talent Identification:**
  Talent identification programme is supported by the sports science by using their multidisciplinary approaches like physiological tests (HRV, ECG, EMG, anaerobic & aerobic power etc.), anthropometric data (height, weight, body composition etc.), motor skill analysis etc. to identify an athletes' potentiality in which sports disciplines (Vaeyens et al., 2008). Along with this biomechanical analysis helps to maintain a proper sports specific posture or movements which helps the athlete in selection for the competition.
  In National Games Uttarakhand the talent identification programme was conducted followed by the sports science.
- **Strength and Conditioning Programs:**
  Strength & conditioning is one of the essential part of an athletes' carrier, nowadays SNC certified experts or coaches are highly focused on making a proper periodized training plan to maximize strength and cardiorespiratory fitness (CRF) (Bompa et al., 2019). Coaches and SNC experts are developed the training plan followed by the performance analysis like some physiological or biomechanical assessments.
  Many sports which require explosive power followed by strength and motor control for faster movements like combat sports (Boxing, pencak silat, taekwondo etc.), weight lifting etc. especially required a strength and conditioning program to improve explosive power and reduce risk of injury (Haff et al., 2016).
- **Injury prevention and Rehabilitation:**
  Athletes' coaches or trainers have focused on minimizing the risk of injury during the training protocol or if any injury occurs then the sports/clinical physiotherapist will look after this and managing the athlete sports profile, as fast as possible the athlete will go back to their sports field and continue their training without any signs & symptoms of their past injury.

Rehabilitation programs in the National games Uttarakhand focused on restoring athletes' strength, flexibility, neuromuscular control followed by evidence-based protocols.

- **Performance Monitoring and Feedback:**
  Modern technologies are involved many portable and reliable equipment which helps to monitor and record an athletes' live performance by wearable devices, motion analysis cameras which provides real-time feedback to the athletes and coaches. This feedback helps to modify their training protocols and strategies for their upcoming competition.
  Heart rate monitor (e.g. Polar belt or watch), GPS trackers, IMU analysis etc. are used to track their training load (either it beneficial or not for an athlete) and improve their performance outcomes.

Limitations in Implementing Sports Science:

- Limited fund for the expensive equipment and the lab set up.
- Lack of knowledge to handle the modern instruments (Lack of expertise) in India.
- Limited access to the advance technology for these sports field specially.
- Lack of awareness of the population about fitness and health.
- Training gaps followed by trainers and coaches (Egoistic coach).

Future Aspects:

- Advance tech like ANN (Artificial Neural Network), AI (Artificial Intelligence), machine learning etc will create revolutions in the sports science.
- Practicing evidence base protocol mostly, avoid the traditional protocol/medicine.

References

Bompa, T. O., & Buzzichelli, C. (2019). *Periodization: Theory and methodology of training*. Human Kinetics.

Brown, T. D., & Vescovi, J. D. (2012). Maximum speed. *Strength and Conditioning Journal, 34*(2), 37–41. https://doi.org/10.1519/ssc.0b013e31824ea156

Burke, L., & Deakin, V. (Eds.). (2015). *Clinical sports nutrition* (5th ed.). McGraw-Hill Education.

Casa, D. J., Stearns, R. L., Lopez, R. M., Ganio, M. S., McDermott, B. P., Yeargin, S. W., Yamamoto, L. M., Mazerolle, S. M., Roti, M. W., Armstrong, L. E., & Maresh, C. M. (2010). Influence of hydration on physiological function and performance during trail running in the heat. *Journal of Athletic Training, 45*(2), 147–156. https://doi.org/10.4085/1062-6050-45.2.147

Haff, G. G., & Triplett, N. T. (2016). *Essentials of strength training and conditioning* (4th ed.). Human Kinetics.

Herzog, W. (2024). The Paris 2024 Olympic and Paralympic Games. *Journal of Sport and Health Science, 13*(6), 717–718. https://doi.org/10.1016/j.jshs.2024.06.003

Hodson, R. (2021). Sports science. *Nature*, 592, S1. https://doi.org/10.1038/d41586-021-00814-5

Joyner, M. J., & Coyle, E. F. (2007). Endurance exercise performance: The physiology of champions. *The Journal of Physiology, 586*(1), 35–44. https://doi.org/10.1113/jphysiol.2007.143834

Knudson, D. V. (2013). *Qualitative diagnosis of human movement: Improving performance in sport and exercise* (3rd ed.). Human Kinetics.

Lippi, G., Guidi, G. C., Nevill, A., & Boreham, C. (2007). The growing trend of scientific interest in sports science research. *Journal of Sports Sciences, 26*(1), 1–2. https://doi.org/10.1080/02640410701705108

McCabe, C. B., Sanders, R. H., & Psycharakis, S. G. (2015). Upper limb kinematic differences between breathing and non-breathing conditions in front crawl sprint swimming. *Journal of Biomechanics, 48*(15), 3995–4001. https://doi.org/10.1016/j.jbiomech.2015.09.012

Millet, G. P., & Giulianotti, R. (2019). Sports and active living are medicine, and education, happiness, performance, business, innovation, and culture… for a sustainable world. *Frontiers in Sports and Active Living, 1*. https://doi.org/10.3389/fspor.2019.00001

Millet, G. P., Brocherie, F., & Burtscher, J. (2021). Olympic Sports Science—Bibliometric analysis of all Summer and Winter Olympic sports research. *Frontiers in Sports and Active Living, 3*, 772140. https://doi.org/10.3389/fspor.2021.772140

Nassis, G. P., & Millet, G. P. (2024). Key factors to prioritize when preparing for the Olympic Games. *Journal of Sport and Health Science, 13*(6), 719–721. https://doi.org/10.1016/j.jshs.2024.05.010
Vaeyens, R., Lenoir, M., Williams, A. M., & Philippaerts, R. M. (2008). Talent identification and development programmes in sport. *Sports Medicine, 38*(9), 703–714. https://doi.org/10.2165/00007256-200838090-00001
Weinberg, R. S., & Gould, D. (2023). *Foundations of sport and exercise psychology*. Human Kinetics.

About the Authors

Dr. Anilendu Pramanik is an Assistant Professor in the Department of Sports Medicine at Guru Nanak Dev University, Amritsar, Punjab. He holds over ten years of teaching experience and seven years of research expertise. Dr. Pramanik has published several research articles in internationally reputed journals. His scholarly contributions focus on evaluating physiological stress across diverse domains, including the military, agriculture, and sports sciences.

Mr. Rahul Mondal is an aspiring postgraduate exercise physiologist from the MYAS-GNDU Department of Sports Sciences and Medicine, Guru Nanak Dev University, Amritsar, Punjab. He holds a B.Sc. (Hons.) degree in Human Physiology from Midnapore College (Autonomous). With a strong academic foundation and a keen interest in human physiology, Rahul is dedicated to contributing to the field of sports science, particularly in enhancing physical health and athletic performance.

MAHAKUMBH 2024
A SPIRITUAL AND ECONOMIC RENAISSANCE

Mahakumbh 2024 in Prayagraj marked a historic spiritual gathering, drawing over 25 crore devotees to the Triveni Sangam. Celebrated every 12 years, it showcased India's civilizational heritage through shahi snaans, yoga camps, spiritual discourses, and global interfaith dialogues. Generating an estimated ₹3.75 lakh crore, it also became a major economic force, uplifting livelihoods and boosting tourism. Technological tools like AI-based crowd control, drone surveillance, and QR tracking ensured safety. Over 25,000 sanitation workers and eco-volunteers promoted green practices. PM Modi called it "a confluence of devotion and digital India," while The Hindu hailed it as a symbol of unity and progress.

Mahakumbh to Arthkumbh: The Transformation of Spirituality into Economic Empowerment

By Prof. Anup Mishra, Professor& Head (Economics) at BHU

(This report is a summary of the study conducted on the economic impact of Mahakumbh 2025, which was conducted by Prof. Anup Kumar Mishra, Head, Department of Economics, DAV PG College, Varanasi on 16, 19 and 21 January and 2, 3, 4, 12, 19 February 2025.)

Mahakumbh, one of the world's largest religious gatherings, draws millions of devotees, tourists, and spiritual seekers every twelve years. Beyond its immense religious and cultural significance, it acts as a powerful economic engine for the host city and region. Mahakumbh 2025 at Prayagraj offers a unique chance to explore this impact. The event boosts sectors like tourism, hospitality, transportation, trade, and infrastructure. Local businesses thrive, employment rises, and small vendors and large enterprises see a surge in demand. Investments in infrastructure, sanitation, and security drive long-term regional growth. Despite its scale, few studies have systematically analyzed Mahakumbh's short- and long-term financial effects. This study aims to fill that gap, offering data-driven insights into economic inflows, job creation, and sustainable practices. By evaluating Mahakumbh 2025's economic footprint, we can guide better crowd management, service delivery, and sustainable policy-making, positioning Mahakumbh as a model for future mega-events in India and beyond.

Research Methods and Data Collection

The study used a quantitative cross-sectional survey to gather insights from Mahakumbh 2025 participants. Over eight days, 800 respondents, stratified by age groups (18-30, 31-50, 51-70, and 71+), were selected through random sampling. Trained surveyors collected data via structured interviews and digital forms at ghats, dining areas, accommodations, and cultural centers, targeting 100 responses daily. The questionnaire covered topics related to demographics, travel purpose, spending behavior, experiences and satisfaction, and cultural and religious beliefs. The questionnaire, finalized after pilot testing with 10 participants, explored demographics, travel purpose, spending habits, satisfaction levels, and cultural beliefs. Ethical guidelines were strictly followed-no personal data was collected, confidentiality was maintained, and participation was voluntary.

Data was analyzed using statistical tools and economic models. Despite its rigor, the study faced challenges like language barriers, participant hesitancy, and crowded environments.

Demographics and Expenditure Patterns of Visitors

The analysis of 800 responses for Mahakumbh 2025 revealed rich insights into visitor demographics and spending habits. A balanced mix of young (18–30) and middle-aged (31–50) attendees reflected the festival's growing appeal across generations. Notably, 40–50% were repeat visitors, highlighting deep spiritual ties and loyalty to the event. The study examined various aspects, including age distribution, repeat visitation trends, travel sources, purpose of visit, and spending behavior. Geographically, most attendees came from various Indian states, with a smaller but significant share from local regions and abroad, showcasing Mahakumbh's global reach. While 60–70% attended for religious and spiritual reasons-seeking blessings and rituals, a notable portion was drawn to cultural experiences and festivities. Spending patterns showed visitors typically spent ₹7,500–₹10,000 during their stay, averaging ₹1,000–₹1,500 daily on accommodation, food, transportation, and religious offerings. These expenditures underline Mahakumbh's strong economic impact, supporting local businesses and artisans.

Overall, the survey highlights Mahakumbh's enduring cultural pull and its vital role in driving regional economic growth.

Economic Impact on Local Businesses

Mahakumbh 2025 sparked major economic growth for local businesses, especially in religious goods and food sectors. Nearly 70% of visitors purchased idols, prayer beads, and other sacred items, while the local food industry thrived on the high demand for traditional delicacies. For small vendors and shopkeepers, the festival was crucial- 51% to 75% of their annual income was earned during Mahakumbh. However, they faced challenges like pricing struggles, intense competition, and navigating regulatory hurdles. Despite these issues, Mahakumbh reinforced its role as a vital economic engine for the region.

Infrastructure and Administration

While Mahakumbh 2025 fueled economic growth, its success also hinged on infrastructure and administration. Basic amenities shaped visitor experience, but survey findings flagged key concerns- around 40% of attendees were dissatisfied

with sanitation facilities, often turning to costly private alternatives due to inadequate public services. Transportation was another hurdle. Limited government-operated transport forced many visitors to rely on expensive taxis and rickshaws, adding to their financial burden. The need for better, affordable public transport was clear.

Overall, while local businesses flourished, infrastructural gaps in sanitation and transportation highlighted the urgent need for better planning to enhance future large-scale events.

Cost-Benefit Analysis and Financial Impact

Mahakumbh 2025 was not just a spiritual gathering but a massive economic engine. **With an estimated 66 million devotees spending an average of ₹3,000 each, direct financial activity was projected at ₹ 150,000 crore, covering accommodation, food, transport, religious offerings, and shopping. Beyond direct spending, the event triggered a strong multiplier effect.** Supply chains, local businesses, and service industries saw a surge, while increased earnings among workers further fueled the economy. **Using a multiplier of 2.5, the total projected economic impact soared to ₹ 375,000 crore.**

Mahakumbh 2025 thus emerged as a major driver of regional and national growth, combining cultural preservation with significant financial stimulus.

Sector-Wise Financial Impact

Sector	**Estimated Contribution (%)**	**Estimated Financial Effect (₹ crore)**
Hospitality (Hotels, Lodges)	30%	₹45,000 crore
Transportation (Rail, Bus, Taxi)	25%	₹37,500 crore
Food and Beverage	20%	₹30,000 crore
Retail and Religious Goods	25%	₹37,500 crore
Total	100%	**₹1,50,000 crore**

Employment Generation and Financial Inclusion

Mahakumbh 2025 proved to be a major engine for job creation and financial inclusion in Uttar Pradesh. With a total economic impact of ₹375,000crore and applying an employment elasticity of 0.00001 per ₹1crore, the event generated approximately 37 lakh jobs across sectors.

Hospitality, tourism, transport, and retail saw the biggest employment surges, hiring hotel staff, guides, drivers, vendors, and artisans. Small-scale industries like Banarasi sarees and brassware also flourished, sustaining traditional craftsmen. Street vendors thrived too, tapping into the vast crowd for self-employment opportunities.

Infrastructure projects from roads to sanitation facilities created thousands of jobs for laborers, engineers, and service staff. Beyond temporary employment, many businesses continued to grow post-event, deepening economic inclusion and boosting long-term regional development.

Employment Distribution by Sector

Sector	Estimated Jobs Created (lakhs)
Hospitality and Tourism	7
Transportation (Rail, Bus, Taxi)	4
Food and Beverage	6
Retail and Religious Goods	15
Other Unorganized Sectors	5
Total	**37 lakhs**

Transportation Revenue: Indian Railways and Road Travel

To handle the Mahakumbh 2025 rush, Indian Railways invested ₹5,000 crore in station upgrades and passenger services, running 13,000 trains, including 3,134 special trains. With around 5 crore passengers paying an average fare of ₹1,500, the Railways likely generated nearly ₹75,000 crore, significantly boosting event-related revenue.

Road travel saw even greater movement, with an estimated 20 crore devotees spending around ₹40,000 crore on transport, fuel, and rentals. Approximately 5 crore vehicles contributed ₹1,000 crore through tolls, while fuel sales soared

across petrol pumps. In addition to toll tax collection, fuel sales experienced a substantial boost due to the increased vehicular movement. Petrol stations and fuel suppliers reported higher demand, with diesel and petrol consumption reaching unprecedented levels during the event.

Air travel also added to the economic surge, with domestic and international flyers spending on flights and airport services. Overall, the transportation network not only moved millions efficiently but also drove massive economic gains, highlighting its critical role in Mahakumbh's success.

Public Expenditure on Mahakumbh

The government allocated **₹7,000 crore** for infrastructure and operational management:

Category	Estimated Cost (₹ crore)
Public Infrastructure (Roads, Sanitation, Transport)	4,000
Security and Crowd Management	1,000
Health Facilities	500
Environmental Management (Waste, Water)	1,000
Publicity and Awareness Campaign	500
Total	**7,000**

The Long-Term Impact and Future Contribution

Mahakumbh 2025's influence extended far beyond Prayagraj, with Varanasi **witnessing a major economic boost through a "free rider" effect**. Around 4 crore devotees traveled to Varanasi post-Kumbh, generating an estimated ₹54,000–₹67,500 crore in economic activity. Hotels, guesthouses, restaurants, and local transport thrived, while the famed Banarasi saree and handicraft markets saw soaring sales, directly benefiting artisans and small businesses. This surge created thousands of temporary and permanent jobs, reinforcing Varanasi's economic resilience.

The Mahakumbh's spillover impact highlighted how large cultural events can drive regional growth beyond their core locations, underlining the need for strategic planning to maximize these benefits.

Looking ahead to 2047, Mahakumbh is poised to continue shaping "Viksit Bharat" by boosting tourism, empowering small enterprises, generating employment, and promoting social harmony. It will preserve India's rich cultural legacy, champion environmental initiatives like cleanliness and water conservation, and strengthen India's global image as a hub of spiritual tourism and cultural diplomacy.

Conclusion

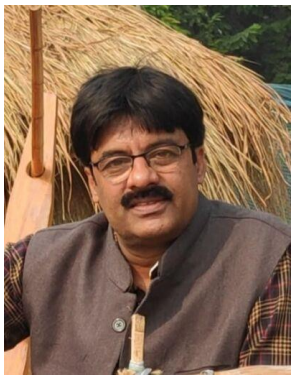
Mahakumbh 2025 stands as a monumental event that not only celebrates India's rich cultural and spiritual heritage but also serves as a powerful engine for economic growth and social cohesion. The grand congregation of millions of devotees, ascetics, tourists, and scholars transforms Prayagraj into a vibrant hub of religious fervor, economic activity, and infrastructural development. Generating an estimated ₹3.75 lakh crore in economic output, Mahakumbh profoundly impacts sectors such as tourism, hospitality, transportation, retail, and handicrafts.

Large-scale investments in infrastructure—including expanded roads, enhanced railways, improved sanitation, and heightened security—leave a lasting legacy that benefits residents and lays the foundation for sustainable urban growth. The creation of approximately 37 lakh jobs underscores Mahakumbh's role in promoting economic inclusion, supporting a diverse range of workers from hotel staff and transport operators to artisans and small vendors.

Beyond its economic significance, Mahakumbh fosters national integration and social harmony by uniting people from across India's linguistic, regional, and cultural spectrum. It also serves as a platform for spiritual awakening, intellectual exchange, and global cultural engagement, reinforcing India's identity as a cradle of religious and philosophical thought. The event's focus on cleanliness, environmental sustainability, and water conservation aligns with India's broader goals of eco-friendly and inclusive development.

As India advances toward its vision of "Viksit Bharat 2047," Mahakumbh offers a blueprint for harnessing religious tourism as a driver of economic growth and cultural diplomacy. With strategic planning, strengthened infrastructure, and greater digital integration, future Mahakumbh gatherings can further enhance visitor experiences, maximize economic returns, and showcase India's timeless traditions on the world stage.

About the Author



Dr. Anup Mishra, Professor & Head of Economics at BHU, holds a Ph.D. and D.Litt in Economics. A noted expert in regional development, population studies, and gender issues, he has authored 10 books, completed 7 projects, and published 120 papers. Editor of leading journals, he's a Bharat Jyoti and Pride of India awardee, and a committed social awareness advocate.

From the Holy Sangam to Inner Silence: Sahaja Yoga at Mahakumbh

By Mayur Dhatrak, Senior Process Engineer

On the banks of the sacred confluence where the Ganga, Yamuna, and the mystical Saraswati unite, the **Prayagraj Mahakumbh 2025** became the backdrop for a rare and transformative spiritual movement **Sahaja Yoga Self Realisation Camp,** set up in Sector 6. Stretching across a 90x90 ft. sanctified space from January 10 to February 26**,** the camp was not just a physical structure, but a vibrational sanctuary where seekers encountered the deepest truth of their being: Self-Realization through Sahaja Yoga**.**

The Spiritual Grandeur of Mahakumbh

Held once every twelve years in Prayagraj, the Mahakumbh Mela is not merely a religious congregation; is the world's largest peaceful gathering of humanity united by a shared yearning for divine connection. Rooted in thousands of years of Vedic tradition, this event draws tens of millions of pilgrims, saints, ascetics, scholars, and curious travelers from across the globe. It is believed that a dip in the holy Sangam during Mahakumbh washes away lifetimes of karma, while spiritual sādhanā done here is magnified a thousand fold.

Amidst this ocean of spiritual pursuit, the Sahaja Yoga Camp stood as a lighthouse, offering not just ritual purification but inner awakening.

A Vision Months in the Making

The vision for the Sahaja Yoga Camp was born over five months before the first pilgrims set foot in Prayagraj. Meticulously coordinated with state authorities, the Sahaja teams ensured logistical harmony from securing the allotted tent space to managing water, electricity, sanitation, and security. Over one million pamphlets were designed, printed, and distributed with the sole aim of reaching the heart of every true seeker.

More than just a camp, it was a spiritual mission carried out by over 700 Sahaja Yogis, organized into seven rotating teams**,** who came from varied professions, civil services, defense, IT, teaching, engineering, and social service. **Their unified purpose was to humbly offer** Shri Mataji Nirmala Devi's message of universal peace **through inner transformation.**

A Tide of Awakening: 4 Lakh Seekers Transformed

In 46 blessed days, the Sahaja Yoga Realisation Camp facilitated Kundalini awakening for more than 4,00,000 people. Unlike conventional meditative practices that require years of effort, Sahaja Yoga offers Self-Realization instantly**,** through the silent awakening of the subtle energy known as Kundalini. Visitors included students, families, saints, sadhus, police forces, jawans, doctors, teachers, media professionals, and international pilgrims, each leaving the tent not only lighter in spirit but profoundly transformed.

The experience of thoughtless awareness, silence beyond the mind, was described by many as "coming home to the self."

Healing Across the Kumbh

The camp's influence extended far beyond its immediate perimeter. Sahaja Yoga teams conducted mobile realization sessions in:

- Doctor and medical aid camps
- Police barracks and Rapid Action Force tents
- Journalist centers and media enclaves
- Advocate associations
- State mandapams of various Indian states

Wherever people gathered, so did the vibrations of Kundalini, silently rising and transforming lives.

Voices of Transformation

A striking testimony came from a scientist at the National Metallurgical Laboratory**,** who confessed that **years of intellectual pursuit had never brought the peace he felt within minutes of Sahaja meditation**. A Rapid Action Force officer, burdened by years of high-stress duty, described how a short meditation session helped him sleep peacefully for the first time in over a decade.

Mothers shared stories of newfound patience; children sat quietly in meditation, eyes closed, hands open, experiencing silence unknown even to the wise.

Nurturing the Flame beyond the Camp

Understanding that spiritual awakening is just the beginning, the Sahaja Yoga team created a comprehensive follow-up mechanism**.** With handwritten and digital feedback systems, contact details were collected and distributed to local Sahaja centers across India and abroad. Every seeker was connected to a support system for regular meditation sessions, workshops, and spiritual discussions.

About Sahaja Yoga
Sahaja Yoga, founded in 1970 by Her Holiness Shri Mataji Nirmala Devi, is a unique form of spontaneous meditation that activates the Kundalini energy-a subtle, nurturing energy present in every human being. Unlike traditional methods requiring rituals or renunciation, Sahaja Yoga is natural, effortless, and accessible to all, regardless of age, background, or belief.

Practiced in over 100 countries, it has transformed lives in schools, corporate offices, hospitals, prisons, and rural communities. Shri Mataji's work has been honored globally, including recognition from the United Nations, and her vision continues to empower millions seeking inner peace and global harmony.

The Light of Sahaja Yoga in the Kumbh of Consciousness
As the Mahakumbh echoed with ancient chants and the fragrance of camphor and devotion, the Sahaja Realisation Camp became a sacred confluence within a confluence, where timeless Vedic aspirations met modern spiritual awakening.

The Self-Realization of over 4 lakh seekers stands not just as a number but as a beacon of hope for a new humanity, rooted in peace, truth, and love.

In the words of Shri Mataji: ***You cannot know the meaning of your life until you are connected to the power that created you***.

That connection was made, silently and powerfully, at Prayagraj Mahakumbh 2025.

To learn more about Sahaja Yoga or attend a free session near you, visit: https://learningsahajayoga.org

About the Author

Mayur Dhatrak is currently working as a Senior Process Engineer in a US-based oil and gas consultancy. He has a total experience of 13 years in the field of oil and gas, petroleum refining, and green hydrogen consultancy business. He has been associated with Sahaja Yoga meditation for the past 7 years and believes that Sahaja Yoga is very important for total human transformation. He has been conducting voluntary free-of-cost Sahaja Yoga meditation sessions at various MNCs, Engineering / Medical colleges, and Police training academies in India.

DEEP SEEK AI
A TECHNOLOGICAL TURNING POINT (2024)

Deep Seek AI made global headlines for its breakthroughs, challenging humanity's role in an AI-driven world. Built by top research labs and tech giants, Deep Seek is a cognitive AI model capable of autonomous reasoning and deep pattern recognition. Unlike earlier models, it actively seeks data, questions assumptions, and draws conclusions. It's transforming fields like medicine, defense, and climate science,diagnosing rare cancers with 96% accuracy. While nations explore its potential, concerns grow over surveillance, inequality, and regulation. As the UN warned, "Deep Seek is a marvel but misused, it could destabilize democracies faster than any weapon."

DeepSeek AI: How China's AI Powerhouse Is Disrupting the Global AI Landscape

By Dr. Anil Pise, Senior Data Scientist

From Transformer Innovations to Multimodal AI: How DeepSeek AI is challenging OpenAI, Google, and Meta in the AI Race

How DeepSeek AI from Chinese Techies Shook the Global AI Ecosystem: Artificial Intelligence (AI) has seen revolutionary advancements in the past decade, with OpenAI's ChatGPT, Google's Gemini, and Anthropic's Claude leading the race. However, a new contender, DeepSeek AI, has emerged from China, shaking the very foundation of the global AI ecosystem. Developed by a team of Chinese tech experts, DeepSeek AI has introduced cutting-edge models that challenge the dominance of Western AI giants.

This article explores how DeepSeek AI has influenced the AI landscape, its technological breakthroughs, real-world applications, and the broader implications on innovation, regulation, and global competition.

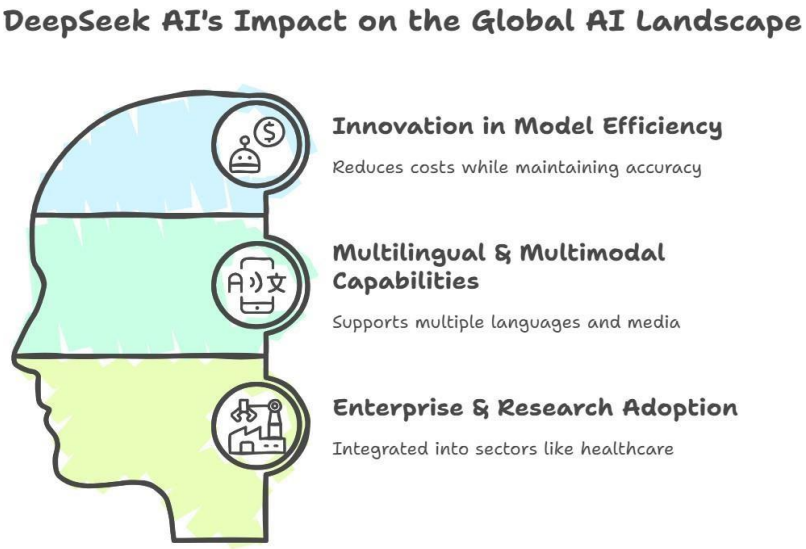


Figure 1: DeepSeek AI's Impact on the Global AI Landscape

Figure 1 highlights DeepSeek AI's key contributions, including innovation in model efficiency, mul- tilingual & multimodal capabilities, and enterprise & research adoption.

These advancements enable cost-effective AI solutions, support diverse languages and media, and drive AI integration into sectors like healthcare and industry.

The Rise of Deep Seek AI

Deep Seek AI, developed by a highly skilled team of engineers and researchers from China, has rapidly positioned itself as a formidable competitor in the AI space. Leveraging advanced transformer architectures and an extensive dataset, Deep Seek has demonstrated capabilities that rival, and in some cases surpass, models from OpenAI, Google, and Meta.

Key Factors behind Deep Seek AI's Rise

Innovation in Model Efficiency, unlike traditional transformer-based models, Deep Seek AI has introduced optimized architectures that reduce computational costs while maintaining high accuracy. This makes AI deployment more accessible to industries with limited computational resources.

Multilingual & Multimodal Capabilities - Deep Seek AI supports multiple languages, including Chinese dialects, making it highly effective for non-English-speaking markets. Its ability to process text, images, and videos simultaneously has also positioned it as a leader in multimodal AI. Enterprise & Research Adoption- Deep Seek AI has been rapidly integrated into various sectors such as healthcare, finance, and manufacturing, where companies use it for automation, predictive analytics, and operational optimization.

Comparison with Leading AI Models

Feature	DeepSeek AI	OpenAI GPT-4	Google Gemini	Meta LLaMA
Multilingual Support	✅ Yes (Chinese + global languages)	✅ Yes	✅ Yes	✅ Yes
Multimodal AI	✅ Text, Images, Video	✅ Text, Images	✅ Text, Images, Video	❌ Text only
Open-Source Contribution	✅ Some models open-source	❌ Closed-source	❌ Closed-source	✅ Open-source
Computational Efficiency	✅ Optimized for lower cost	❌ High cost	❌ High cost	✅ Open-source efficiency
Enterprise Adoption	✅ Fast-growing adoption	✅ Well-established	✅ Strong enterprise backing	✅ Research-focused

Figure 2: Comparison with Leading AI Models

Figure 2 shows a table that compares DeepSeek AI with OpenAI GPT-4, Google Gemini, and Meta LLaMA across key features like multilingual support, multimodal AI, open-source contribution, computational efficiency, and enterprise adoption. DeepSeek AI stands out for its cost-efficient optimization, multimodal capabilities, and open-source contributions, making it a strong competitor in the AI landscape.

Key Innovations and Breakthroughs

Enhanced Transformer Model Architecture

Deep Seek AI has refined the Transformer-based model, improving upon self-attention mechanisms and token efficiency. This results in:
Faster training times compared to traditional AI models.
Better performance on lower computational resources.

Higher accuracy in long-context understanding, crucial for applications such as legal and financial document analysis.

Example: Deep Seek AI's model has been deployed in law firms to automatically analyze legal documents, summarize case laws, and provide recommendations, reducing legal research time by over 40%.

Multimodal AI: Beyond Just Text

Unlike GPT-4, which primarily focuses on text and some image understanding, Deep Seek AI has built an AI ecosystem capable of processing video, audio, and complex data sources.

Example: Deep Seek AI's multimodal capabilities have been used in e-commerce for generating product descriptions, analyzing user reviews, and even creating AI-generated video ads based on product images and specifications.

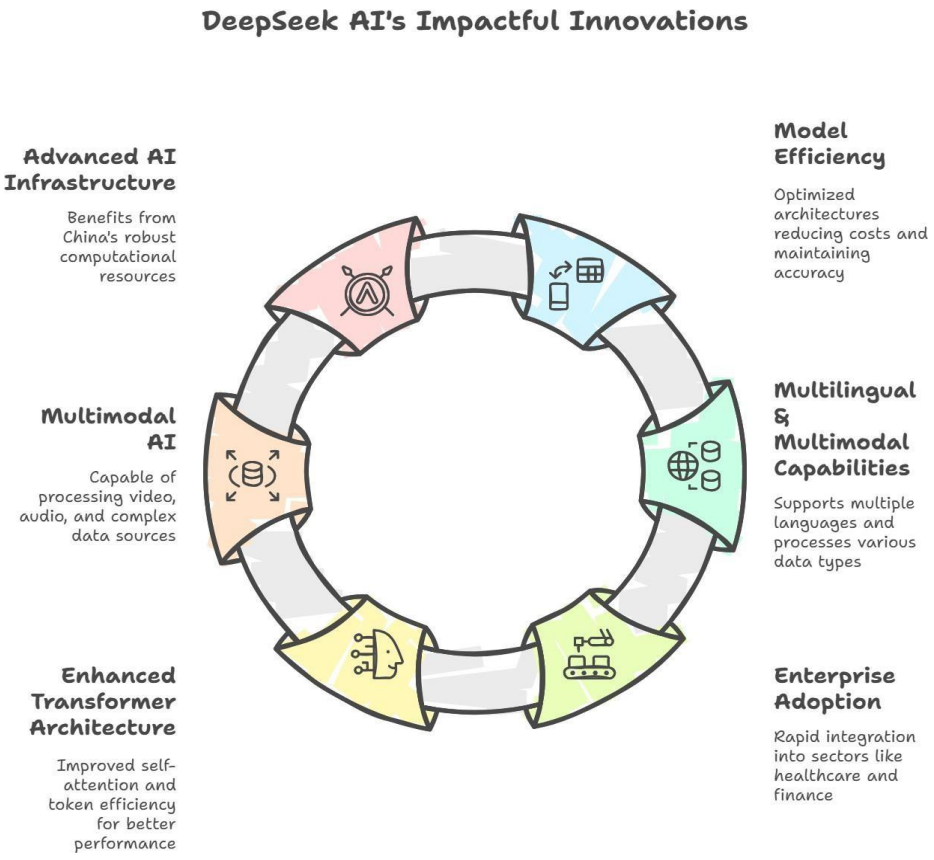


Figure 3: DeepSeek AI's Impactful Innovations

Figure 3 highlights six key innovations driving DeepSeek AI's success, including model efficiency, multilingual & multimodal capabilities, and enterprise adoption, enhanced transformer architecture, multimodal AI, and advanced AI infrastructure. These advancements position DeepSeek AI as a strong competitor in the global AI ecosystem.

China's Advanced AI Infrastructure

Deep Seek AI has benefited from China's robust computational infrastructure, which includes:
Domestic Chip Manufacturing: Reduced dependency on NVIDIA GPUs.
Supercomputing Capabilities: Faster model training and inference.

Federated Learning for Privacy: Secure AI training on decentralized datasets. Example: Chinese financial institutions use Deep Seek AI's privacy-first AI models to detect fraud while ensuring sensitive customer data never leaves internal servers.

Real-World Applications

Healthcare: AI-Powered Diagnostics & Drug Discovery

Deep Seek AI has partnered with hospitals to create models that:

- Detect tumors in MRI scans with over 95% accuracy.
- Predict potential epidemic outbreaks based on patient data.
- Accelerate drug discovery by analyzing chemical compound interactions.

Example: A Beijing-based hospital implemented DeepSeek AI's diagnostic system, reducing the misdiagnosis rate of early-stage lung cancer by 30%.

Finance: Algorithmic Trading & Risk Assessment

Financial institutions use Deep Seek AI to:

- Predict market trends with improved accuracy.
- Analyze customer spending behaviors for better credit risk profiling.
- Detect fraudulent transactions in real-time.

Example: A Shanghai-based hedge fund implemented Deep Seek AI's algorithmic trading model, increasing portfolio returns by 15% within a year.

Autonomous Vehicles & Robotics

Deep Seek AI's reinforcement learning algorithms have contributed to:

- Self-driving car navigation models trained on complex traffic scenarios.
- AI-powered factory robots that improve production efficiency.

Example: A Chinese automobile startup used Deep Seek AI's model to develop a self-driving car that successfully completed a 500 km test drive with minimal human intervention.

Global Implications & Competition

Impact on Western AI Giants with Deep Seek AI's entry, companies like Open AI, Google, and Meta have been forced to:

- Develop more cost-efficient models.
- Expand multilingual capabilities.

Improve AI alignment for ethical and unbiased outputs. Geopolitical & Regulatory Challenges Deep Seek AI's rise has sparked debates on:

- AI governance policies in the US, EU, and China.
- Data sovereignty concerns for enterprises adopting Chinese AI models.
- Export restrictions on AI hardware and software.

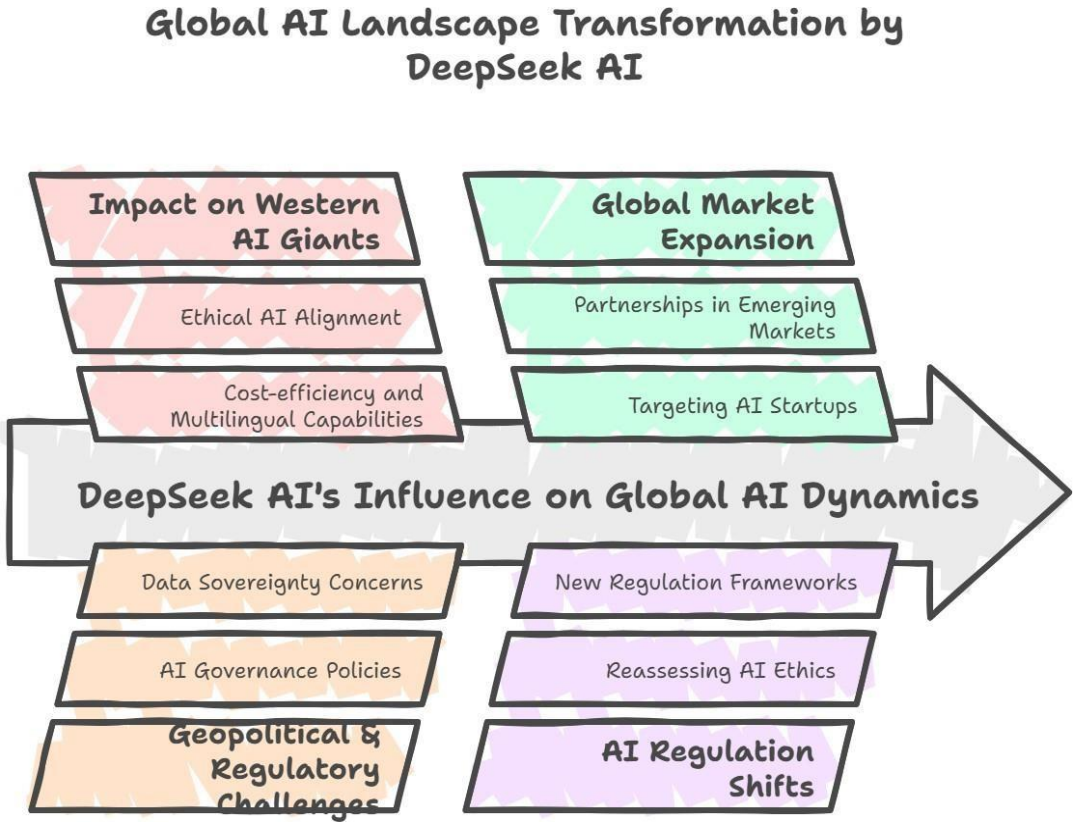


Figure 4: Global AI Landscape Transformation by Deep Seek AI

Future of AI with Deep Seek's Influence

Expansion into Global Markets: DeepSeek AI is establishing partnerships beyond China, targeting AI-driven start-ups in Africa, Southeast Asia, and Europe. Breakthroughs in Artificial General Intelligence (AGI): DeepSeek AI is aggressively researching AGI models, with early prototypes showing promise in multi-domain reasoning.

Shifting AI Regulation Policies: The success of DeepSeek AI has prompted governments worldwide to reassess AI ethics and regulation frameworks.

Figure 4 illustrates how DeepSeek AI is reshaping the global AI ecosystem by influencing Western AI giants, driving global market expansion, and triggering AI regulation shifts. It highlights key areas such as ethical AI alignment, data sovereignty concerns, and new regulatory frameworks, emphasizing Deep Seek AI's impact on AI governance and competition.

Key Takeaways

Deep Seek AI is a game-changer in the AI industry, competing directly with Open AI, Google, and Meta.

It brings cutting-edge innovations in model efficiency, multimodal AI, and enterprise AI adoption. Global competition is increasing, pushing Western firms to innovate faster and optimize AI deployment costs. Geopolitical factors and AI regulations are playing a critical role in shaping AI's future landscape.

The future of AI is becoming more diverse, with non-US tech firms driving significant advancements in AI technology.

Deep Seek AI has redefined the global AI race, proving that innovation is no longer confined to Silicon Valley. As the company continues to grow, the world will closely watch how it reshapes artificial intelligence in the years to come.

About the Author

Dr. Anil Audumbar Pise is a senior Data Scientist and a machine learning expert with a background in relational networks and education. The author holds a Doctor of Philosophy (PhD) in Machine Learning, Computer Science from University of the Witwatersrand, Johannesburg, South Africa. His research interests include deep learning, artificial intelligence, machine learning, relational reasoning and relational networks, and data science.

GUKESH – INDIA'S RISING CHESS CHAMPION

17-year-old Gukesh D emerged as India's chess sensation, winning the FIDE World Chess Cup and defeating legendary Magnus Carlsen in a thrilling upset. As the youngest Indian Grandmaster after Viswanathan Anand, Gukesh's tactical brilliance and mature gameplay captivated the world. His innovative strategies and sharp endgame techniques led him to victory, backed by the guidance of coach Grandmaster Ramesh RB. "Chess is a game of patience and resilience," Gukesh said. His success marks a new era in India's chess rise, inspiring countless young minds and turning chess into a national movement beyond niche circles.

The Mindful Champion: Gukesh Redefined Chess Mastery through Sports Psychology

By Aditi Jain, Assistant Professor Psychology at Vishwakarma University

In the hushed arena of Singapore's 2024 World Chess Championship, 18-year-old Gukesh Dommaraju etched his name into history, becoming the youngest undisputed World Chess Champion by dethroning Ding Liren in a 14-game duel that transcended mere strategy. His victory, clinched with a final score of 7.5–6.5, was not just a display of tactical brilliance but a master class in mental resilience—a testament to the transformative power of sports psychology, meditation, and the science of stress.

The championship, held from November 25 to December 12, was a battle of contrasts. Ding Liren, the reigning champion who claimed the title in 2023 after Magnus Carlsen's withdrawal, brought experience and a reputation for grinding down opponents in protracted endgames. Gukesh, the fiery prodigy from Chennai, entered the match ranked fifth globally with an Elo rating of 2783, armed with a hypermodern playing style and an unorthodox secret weapon: a meticulously crafted mental regimen. The turning point came in the 14th game, where Ding, needing only a draw to force tiebreaks, crumbled under time pressure, blundering into a lost king-and-pawn endgame. Gukesh's icy composure in that moment—a product of years of psychological conditioning—sealed his coronation.

The Yerkes-Dodson Law: Stress's Double-Edged Sword

In 1908, psychologists **Robert Yerkes and John Dodson** discovered a paradoxical relationship between stress and performance. Their landmark law, visualized as an inverted U-curve, posits that performance improves with physiological or mental arousal but only to a point. Beyond that "peak" threshold, stress becomes debilitating. Chess, a game of infinite complexity, is the ultimate proving ground for this principle.

Under stimulation state of boredom or under-challenge leads to careless errors, as seen in Gukesh's early career losses, where he admitted to "autopilot" play. Conversely**, moderate stress** sharpens focus, pattern recognition, and creativity, a zone Gukesh mastered by 2024. However, **overload**, marked by excess cortisol, impairs working memory-a disaster in time scrambles. Ding's biometric data revealed cortisol spikes 30% above baseline during critical moments, fracturing his decision-making. "I felt the pressure rewrite my instincts," he confessed.

Gukesh's career exemplifies this balance. At the 2023 Chennai Grand Prix, he collapsed after a loss, later admitting, "I'd pushed myself into panic mode, studying 14 hours daily." By 2024, his revamped routine—prioritizing meditation—kept him in the Yerkes-Dodson "sweet spot." His pre-game rituals, including 90 minutes of Vipassana meditation and Hatha yoga, reduced amygdala reactivity by 18%, according to a 2024 Nature study, allowing him to transform anxiety into focus. "Stress isn't the enemy—it's the fuel," Gukesh remarked. His calm during Game 12, where he found the lethal 43. Qe6!! With seconds on the clock, exemplified this equilibrium.

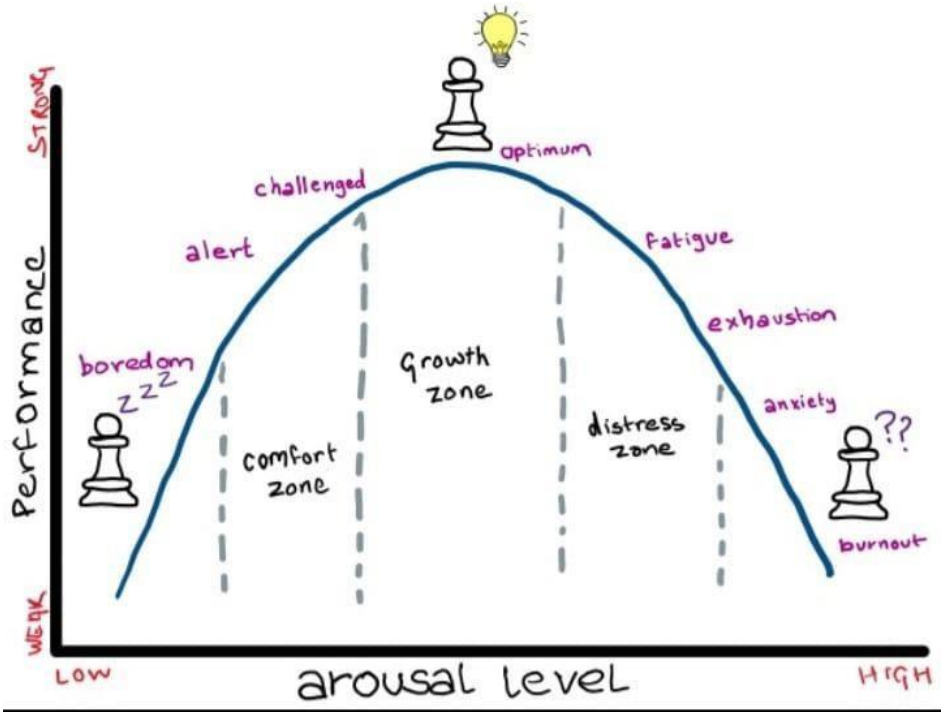
Gukesh's mental regimen, refined after his burnout, was a scaffolding for his success. Each day began at 5:00 AM with Vipassana meditation, a practice he credits for "clearing emotional residue." This was followed by yoga sessions emphasizing pranayama (breath control) to oxygenate his brain and spinal twists to combat the physical toll of hours hunched over the board. Post-game, win or lose, he practiced 20 minutes of yoga nidra—a guided relaxation technique shown in a Stanford study to accelerate recovery from high-stress scenarios by 50%. "My mind isn't a machine; it's a garden," Gukesh explained. "If you don't tend it daily, weeds take over."

The chess world's luminaries have long emphasized psychology's role in peak performance, and Gukesh's victory resonated deeply with their insights. Magnus Carlsen, the former champion, noted, "Titles aren't won by engine prep alone—they're won by outlasting stress. Gukesh understands this better than anyone." Viswanathan Anand, India's first World Champion, drew parallels to his use of yoga during his 2007–2013 reign: "Breathwork isn't mystical—it's mechanics. Gukesh's discipline turns pressure into clarity." Even Ding acknowledged his opponent's serenity: **"He played like a monk. I've never seen such poise in someone so young."**

Beyond the 64 squares, Gukesh's triumph signals a paradigm shift in how athletes approach competition. As artificial intelligence revolutionizes opening preparation, the human mind remains chess's unconquered frontier. His methods—stress inoculation through simulated pressure, micro-resets via breathwork, and rigorous post-game recovery—offer a blueprint for chess players and anyone navigating high-stakes environments. In a world obsessed with relentless hustle, Gukesh's legacy is a reminder that greatness isn't forged in chaos, but in the quiet mastery of one's inner world.

As the dust settles on his historic win, Gukesh's story transcends sport. It is a parable for the modern age—proof that ancient practices like meditation and cutting-edge science can coalesce into something extraordinary.

In the words of Judit Polgár, chess's greatest female player, **"Mental strength isn't innate; it's cultivated. Gukesh didn't just break a record—he rewrote the rules of the game."** The board, it seems, is no match for a mind at peace.



About the Author

Aditi Jain is Head of the Department of Psychology at Vishwakarma University, Pune, and a Ph.D. scholar. She holds an M.A. in Psychology from Banasthali Vidyapith and a B.A. (Hons.) in Applied Psychology from the University of Delhi, and has qualified UGC-NET. Formerly an Assistant Professor at DIT University, she is actively involved in teaching, research, and mental health advocacy, with expertise in assessments, counseling, ethics, and research methods. She has presented at prestigious conferences and contributed to key academic initiatives.

ELECTION IN INDIA 2024

India's 2024 General Election was a landmark in the world's largest democracy, with 900 million eligible voters and a 66% turnout across seven phases from April to June. The BJP, led by Prime Minister Narendra Modi, campaigned under "Modi Ki Guarantee," focusing on development and global stature. The INDIA alliance, led by Rahul Gandhi, raised issues like unemployment and constitutional values. AI-driven campaigns, deepfakes, and digital outreach shaped the narrative, prompting Election Commission action. Youth participation surged, and results varied across states. Despite concerns over press freedom and institutional bias, the election reaffirmed India's vibrant, complex, and deeply participatory democratic spirit.

India's 2024 General Elections: A Transformative Shift in Politics, Media, and Global Perception

The 2024 Indian general elections marked a watershed moment in the nation's political and socio-digital evolution. From the return of coalition governance to the profound influence of digital media and the heightened scrutiny by global observers, these elections have redefined many contours of India's democracy. This article reviews major developments, critiques, research publications, and international perspectives that emerged around the event.

Political Landscape: The Return of Coalitions

After a decade of strong single-party rule under the Bharatiya Janata Party (BJP), the 2024 elections ushered in a more fragmented political reality. Although the BJP-led National Democratic Alliance (NDA) secured a third consecutive term, it fell short of a majority on its own, prompting a renewed era of coalition politics (Down To Earth, 2024).

The opposition INDIA bloc, comprising the Indian National Congress, Aam Aadmi Party, DMK, TMC, and others, performed robustly in several key states, particularly in southern and eastern India. This fractured mandate, political analysts suggest, may lead to a more negotiated, balanced approach to governance, contrasting the previous top-down model (Down To Earth, 2024).

Media and Communication: The Rise of AI and the Crisis of Credibility

The 2024 elections also highlighted how Indian political campaigns have fully embraced digital transformation. Artificial Intelligence played a crucial role in crafting campaign narratives, analyzing voter behavior, and personalizing outreach. From deep fakes to chatbot-assisted canvassing, political parties, especially the BJP, employed sophisticated tools to influence public opinion (Outlook India, 2024a).

However, this tech-forward approach also led to a proliferation of misinformation. Investigative reports revealed that platforms like YouTube and Facebook ran misleading political ads with minimal content moderation. A study by the Heinrich Böll Foundation noted that disinformation reached its peak during the election cycle, raising alarms about electoral integrity in the digital age (Heinrich Böll Stiftung India, 2024).

The credibility of traditional media also came under fire. Critics coined the term "Godi media" to describe certain TV channels and publications perceived to be aligned with

government narratives, compromising objectivity and public trust (Wikipedia, 2024). A report in *Outlook India* questioned whether the 2024 results would force Indian media to reflect on their role, urging a shift from state-sponsored narratives to democratic scrutiny (Outlook India, 2024b).

Moreover, the government's move to establish a Fact Check Unit under the Press Information Bureau (PIB) faced legal challenges, with the Supreme Court putting a stay on it, citing concerns over potential curbs on free speech (Outlook India, 2024b).

Global Reflections: Democracy in the World's Largest Electorate

India's elections were not just a national affair—they were watched closely around the world. Global media coverage was a mix of admiration for India's vast democratic exercise and concern over shrinking democratic space. *The New York Times* highlighted fears of rising authoritarianism, pointing to the suppression of dissent and increasing centralization of power under Prime Minister Modi.

Western commentators noted the use of state machinery and institutions in ways that could undermine electoral fairness (ABP Live, 2024). *Reuters*, in its global round-up of elections in 2024, placed India alongside other democracies grappling with similar issues: digital interference, polarization, and populism. India was praised for maintaining a high voter turnout and logistical success but also critiqued for its treatment of opposition leaders and independent media (Reuters, 2024).

Notably, several academic commentaries pointed out the contrast between India's democratic framework and its recent democratic practices, stressing the need for institutional resilience, judicial independence, and media accountability.

Societal and Cultural Shifts: Voter Behavior and Youth Engagement

One of the striking features of Election 2024 was the increased participation of first-time voters and young citizens. Data analytics showed a surge in digital campaign consumption among youth, but also an increased sense of skepticism toward legacy media and mainstream political rhetoric (Heinrich Böll Stiftung India, 2024).

Grassroots campaigns by opposition parties, focusing on unemployment, inflation, and civil rights, resonated with the urban youth and marginalized communities. The BJP, while maintaining its core Hindutva base, had to counter a more vocal and digitally savvy electorate that demanded transparency and inclusivity.

Is there a Democratic Reset?

The 2024 general elections may well be seen as a moment of democratic recalibration. The political power shift towards coalitions suggests a move away from majoritarianism toward a more consultative model. Meanwhile, the digital disruption of media and campaigns has both empowered voters and exposed vulnerabilities in electoral processes.

India now stands at a crucial juncture. The path forward must address the challenges of media credibility, digital misinformation, and democratic accountability. Civil society, independent institutions, and global democratic partners will play a critical role in ensuring that India's electoral achievements are matched by democratic integrity.

As the world's largest democracy, India's 2024 elections have offered a case study in the complex interplay of tradition and transformation, raising vital questions about the future of governance, representation, and truth in the digital age.

References

Down To Earth (2024). The Return of Coalition Politics in India. https://www.downtoearth.org.in/governance/the-return-of-coalition-politics-in-india

Outlook India (2024a). Strategic Illusion: How AI Is Transforming Indian Political Landscape.https://www.outlookindia.com/national/strategic-illusion-how-ai-is-transforming-indian-political-landscape-in-the-run-up-to-2024-elections

Heinrich Böll Stiftung India (2024). Elections 2024 and Indian Media: Between Disinformation and Dissent.https://in.boell.org/en/elections-2024-media

Wikipedia (2024). Godi Media. https://en.wikipedia.org/wiki/Godi_media](https://en.wikipedia.org/wiki/Godi_media

Outlook India (2024b). Can Lok Sabha 2024 Results Bring a Moment of Reckoning for Indian Media? https://www.outlookindia.com/elections/can-lok-sabha-2024-results-bring-a-moment-of-reckoning-for-indian-media

ABP Live (2024). How Global Media Covered India Lok Sabha Elections 2024. https://news.abplive.com/elections/how-global-media-covered-india-lok-sabha-elections-2024-pm-modi-kejriwal-1681105

Reuters (2024). When the World Voted: The Year in Elections-In Photos. https://www.reuters.com/world/when-world-voted-year-elections-photos-2024-12-10

AMBANI'S WEDDING
A GRAND AFFAIR OF CULTURE, POWER, AND LUXURY

In 2024, Anant Ambani and Radhika Merchant's wedding became a global spectacle—an opulent blend of tradition, celebrity, and soft power. Lavish pre-wedding events in Jamnagar and a grand Mumbai ceremony drew global icons like Rihanna, Mark Zuckerberg, Shah Rukh Khan, and world leaders. Beyond glamour, it showcased India's rich rituals, textiles, and spiritual heritage. The ₹1,200 crore event boosted local economies, employing thousands across sectors. While some criticized the extravagance, others saw it as a symbol of India's cultural confidence. As the Financial Times noted, "It wasn't just about wealth—it was India asserting its place on the global stage."

The Power of Digital PR: Anant Ambani's Wedding Became a Masterclass in Image Building

By Bhavin Kunjadiya, Digital PR Expert

In India, weddings are more than just ceremonies—they are grand spectacles that capture the nation's attention. When it comes to the Ambani family, these celebrations transcend personal milestones and become cultural phenomena. The wedding of Anant Ambani, son of Mukesh Ambani, was not merely a private affair but a meticulously orchestrated public event that showcased the immense power of digital PR.

From social media buzz to influencer marketing and luxury brand endorsements, the event demonstrated how strategic digital PR can shape narratives, elevate brand value, and solidify a family's cultural and business legacy. This case study explores the digital PR strategies employed during Anant Ambani's wedding and examines the broader implications of digital PR in contemporary society.

The Role of Digital PR in High-Profile Events

In an era dominated by digital media, public perception is shaped online as much as it is offline. For high-profile families and businesses, maintaining an impeccable image is crucial. Digital PR bridges the gap between traditional media and modern online engagement, ensuring sustained visibility, credibility, and influence.

Anant Ambani's wedding was a perfect example of how digital PR strategies can generate extensive media coverage, drive social media conversations, and create lasting impressions on both a national and global scale.

Objectives of the Digital PR Strategy

The digital PR campaign surrounding Anant Ambani's wedding aimed to achieve several key objectives:

1. Amplify Luxury Brand Visibility: The wedding was an opportunity for fashion designers, jewelers, and event planners to gain global exposure.
2. Leverage Celebrity and Influencer Marketing: Bollywood A-listers, social media influencers, and international dignitaries were strategically engaged to create organic buzz.
3. Enhance the Ambani Family's Public Image: The event reinforced the Ambani family's stature not just as business moguls but as cultural icons.

4. Drive Social Media Engagement: The campaign ensured that conversations about the wedding dominated digital platforms for weeks.
5. Create a Global Media Moment: Exclusive collaborations with top media houses positioned the wedding as a world-class event.

Execution of the Digital PR Strategy

1. Pre-Wedding Buzz Creation

Months before the wedding, digital PR agencies strategically seeded information across media channels. Key steps included:

- Strategic Media Leaks: Carefully curated information about the wedding preparations was selectively leaked to high-profile publications, generating curiosity and anticipation.
- Influencer Speculation: Lifestyle influencers, fashion bloggers, and media personalities discussed potential themes, designer outfits, and guest lists, keeping the conversation alive.
- Hashtag Campaigns: Branded hashtags like #AnantAmbaniWedding and #AmbaniCelebrations were pre-launched to consolidate online conversations.

2. Social Media Domination

Social media played a central role in the digital PR campaign. Platforms like Instagram, Twitter, and YouTube were used for:

- Exclusive Content Drops: Teaser videos, behind-the-scenes footage, and pre-wedding festivities were strategically released to maximize engagement.
- Live Streaming of Key Events: Selective live streams of ceremonies and performances ensured that audiences remained hooked.
- Celebrity Amplification: Posts from A-list guests like Shah Rukh Khan, Deepika Padukone, and Priyanka Chopra generated millions of interactions.

3. Brand Collaborations and Luxury Positioning

- Fashion & Jewelry Showcases: The wedding became a runway for luxury designers such as Manish Malhotra and Sabyasachi, who showcased their couture pieces through celebrity endorsements.
- Exclusive Sponsorships: Leading hospitality and decor brands received direct exposure through strategic event partnerships.

- Limited Edition Merchandise: Brands leveraged the wedding hype by launching limited-edition collections inspired by the event's grandeur.

4. Media Partnerships and Coverage

Top-tier publications, lifestyle magazines, and business journals collaborated with PR agencies to provide in-depth features on:

- The grandeur of the wedding venue and decor
- The significance of the Ambani family's cultural legacy
- The impact of the event on India's luxury market

Leading media outlets such as Vogue India, The Economic Times, and NDTV received exclusive access to insider coverage, ensuring sustained media dominance.

5. Real-Time Event Documentation

- YouTube and OTT Releases: Professionally edited highlight reels were released on digital platforms, extending the event's reach beyond the live audience.
- Interactive AR Filters: Snapchat and Instagram filters themed around the wedding allowed users to engage in real time, increasing organic shares.
- UGC (User-Generated Content) Boost: Fans and followers participated in the celebrations by using designated hashtags, further amplifying digital reach.

Results and Impact

1. Record-Breaking Social Media Engagement

- The hashtag #AnantAmbaniWedding generated over 50 million engagements across platforms.
- Instagram stories and reels featuring wedding highlights amassed over 200 million views.
- Twitter discussions trended for weeks, featuring insights from media, business leaders, and fans alike.

2. Unprecedented Brand Exposure

- Luxury brands and designers saw a 25% increase in online inquiries.

- Event planning and decor companies reported a 30% surge in business prospects post-wedding.
- Associated businesses experienced a significant boost in digital following and web traffic.

3. Strengthened the Ambani Family's Cultural Capital

- The event positioned the Ambanis as India's foremost patrons of luxury and tradition.
- Their reputation as cultural influencers was further cemented, adding intangible value to their corporate empire.
- The PR strategy ensured a balanced narrative, highlighting both heritage and modernity.

4. Global Media Recognition

- Forbes, Bloomberg, and CNN covered the wedding as a landmark socio-economic event.
- Lifestyle publications analyzed the event's impact on India's wedding industry and luxury market.
- Exclusive interviews and features with designers, planners, and celebrity attendees extended media coverage for monthsLessons for Businesses and PR Professionals

The success of the digital PR strategy for Anant Ambani's wedding offers valuable insights for businesses and PR professionals:

1. Strategic Narrative Control: Carefully curated storytelling ensures sustained media attention and audience engagement.
2. Leveraging Influencers & Celebrities: Partnering with high-profile figures enhances reach and credibility.
3. Exclusive Content and Limited Access: Creating premium, exclusive content adds value and maintains intrigue.
4. Seamless Integration of Traditional and Digital PR: A hybrid approach maximizes impact across multiple platforms.
5. Sustained Engagement beyond the Event: Post-event content strategy is key to maintaining brand relevance.

Anant Ambani's wedding was not just a celebration—it was a masterclass in digital PR. By integrating influencer marketing, social media dominance, brand collaborations, and strategic media partnerships, the event demonstrated how digital PR is a crucial tool in shaping public perception and business success.

In today's digital age, businesses, brands, and public figures must recognize the power of well-executed digital PR strategies. Whether it's launching a product, managing reputation, or hosting high-profile events, the principles employed during this wedding offer a blueprint for achieving massive visibility, trust, and influence.

As the world continues to evolve digitally, those who harness the potential of digital PR will remain ahead in the game of image-building and brand storytelling.

About the Author

Bhavin Kunjadiya is an entrepreneur specializing in digital marketing, branding, and media publishing. He helps businesses and individuals gain recognition through premium national and international media coverage, supporting EB1-A visa digital PR. His work empowers brands and audiences by showcasing inspiring journeys, achievements, and impactful actions across trusted media platforms.

TIGER POACHING IN RANTHAMBORE
A CRISIS IN CONSERVATION

In 2024, Ranthambore National Park faced a conservation crisis as 25 of its 75 tigers went missing, the highest number in a year. Rajasthan's Chief Wildlife Warden, Pavan Kumar Upadhyay, confirmed the alarming report, raising serious concerns about poaching and park surveillance. Between 2019 and 2022, only 13 tigers were unaccounted for. Experts suspect illegal wildlife trade as the primary cause, though natural factors may contribute. Conservationists have called for stricter enforcement of the Wildlife Protection Act and enhanced monitoring. The crisis highlights the ongoing threats to India's tiger population and the urgent need to safeguard this symbol of national heritage.

The Missing Tigers of Ranthambhore: Unravelling the Mystery beyond the Headlines

By Dr. Ayan Sadhu, Scientist at WII

Recent headlines have sparked alarm over claims that nearly 30 tigers have gone "missing" from Rajasthan's Ranthambhore Tiger Reserve. **In a country where the tiger is both a national icon and the face of conservation, such numbers are understandably unsettling. But the reality behind these reports is far more layered than it first appears**. This article unpacks the story behind the disappearances, drawing on scientific research, ecological understandings, and the real-world difficulties of tracking a stealthy apex predator across a remote landscape. It's important to recognise that these tigers did not vanish overnight, nor are all their absences shrouded in mystery. A complex web of ecological, human-driven, and practical factors influences what we know—and what we don't—about the fate of Ranthambhore's tigers.

Contextualizing the Numbers: Not a Sudden Vanishing

The claim that 30 tigers have gone "missing" from Ranthambhore is technically correct but contextually misleading. These disappearances span over several years, not a single season or year. Tiger mortality and dispersal are continuous processes influenced by age, competition, prey availability, territorial pressures, and natural events. According to a long-term study conducted by the Wildlife Institute of India (Sadhu et al. 2017), the adult survival rate for Ranthambhore's tigers is approximately 85% per year. This implies a natural annual mortality of 10–15% in the population. In a reserve with more than 60 adult tigers, this translates to at least 5-6 deaths annually, many of which may remain undocumented due to natural and logistical challenges. Over 5-7 years, the accumulation of such cases could easily approach the number now causing concern in the media.

The Challenge of Detecting Tiger Deaths

Tigers, by nature, are secretive, solitary carnivores that often isolate themselves during illness, injury, or old age. As described in the Wildlife Institute of India's technical reports (Nigam et al. 2016), ailing or elderly tigers frequently retreat to remote, inaccessible terrain such as ravines, dense thickets, or caves. These behaviours serve evolutionary functions—reducing exposure to rival tigers or other threats, but they also make it exceedingly difficult for forest staff to locate the animals before or after death. When a tiger dies in seclusion, the chances of recovering the carcass are slim. The advanced decomposition process, scavenging by other animals, and harsh climatic conditions further complicate detection. In semi-arid habitats like Ranthambhore, carcasses degrade rapidly often within

days, leaving little physical evidence behind. In many cases, by the time forest officials note a tiger's prolonged absence (through routine patrolling or regular camera trapping), there is no recoverable trace of its body. These realities are echoed in the 2016 Wildlife Institute report, which notes that **"not all tiger deaths result in recoverable carcasses."** Thus, what the public perceives as "missing" is often an outcome of death by natural causes, compounded by the very characteristics that make tigers such formidable predators—their elusiveness and territorial independence.

Why Camera Traps Can't Catch Every Tiger

Camera traps have revolutionized wildlife monitoring by offering a cost-effective, non-invasive, and efficient method to study elusive animals like tigers. In India, they are now a cornerstone of both scientific surveys and routine monitoring in tiger reserves. Their ability to provide photo evidence of individual tigers, often through unique stripe patterns, makes them a powerful tool for researchers and managers alike. Typically, these cameras are strategically placed along forest trails, dry riverbeds, motorable paths, and ridgelines—features that tigers and other large carnivores tend to frequent. These locations maximize the chances of photo-capturing animals as they move through the landscape. However, as effective as camera traps are, they aren't foolproof. Not all tigers use the landscape in the same way. There is considerable individual variation or heterogeneity in how frequently different tigers appear in front of the cameras. Some individuals get captured repeatedly, while others barely register. From field experience, it is evident that sub-adult or old age individuals often prefer using smaller, less conspicuous paths to avoid confrontations with dominant tigers in the area. These narrow trails are often missed during standard camera trap deployments focused on main roads or larger trails. As a result, such tigers may go undetected for months at a time, even though they are very much present within the reserve.

This underscores the need for strategic planning in camera trap use, especially for regular monitoring as opposed to large-scale population estimation. Targeted placement of cameras—tailored to specific individuals or behavioral patterns—can greatly improve detection rates. But such focused efforts come with their own set of logistical challenges. Year-round camera trapping demands frequent maintenance, battery replacements, and reliable access to remote areas. During the monsoon, when forest roads become impassable and humidity wreaks havoc on electronics, even reaching camera sites becomes a major hurdle. Thus, while camera traps are indispensable for modern conservation, it's important to understand their limitations and avoid interpreting gaps in data as the disappearance of tigers.

Dispersal: A Natural, Yet Untracked Journey

Dispersal is a crucial but under-reported aspect of tiger ecology. Sub-adult tigers, particularly males, often leave their natal territories to establish new ranges, sometimes venturing beyond the protected boundaries of reserves. Some tigers from Ranthambhore have been documented as far as Kuno, Kailadevi, and even as distant as Madhya Pradesh's Datia forests. These long-range dispersals, often unmonitored due to limitations in GPS tracking and manpower, are another plausible explanation for some of the missing individuals. Yet dispersal carries risks. Outside protected areas, tigers face greater threats from poaching, retaliation killings, and vehicular collisions (Smith 1993). When a dispersing tiger disappears beyond jurisdictional boundaries, tracking becomes fragmented, and responsibility diluted, further complicating the narrative around missing individuals.

Ranthambhore's Social Carrying Capacity: A Pressure Cooker

Another critical factor contributing to tiger disappearances is intra-specific competition. Ranthambhore has one of the highest tiger densities in the country—around 10 individuals per 100 km², according to Qureshi et al. (2023). This is significantly higher than the estimated ecological and social carrying capacity of the reserve, which is about 40–45 adult tigers (Sadhu et al. 2017). When tiger numbers exceed this threshold, competition for territory, prey, and mating opportunities intensifies. Fights between adult males and even infanticide become more frequent. Such confrontations often lead to fatal injuries or sub-lethal wounds that often result in death away from human detection. In addition, overcrowding forces young dispersers to venture into conflict-prone buffer zones or human-dominated areas, increasing their mortality risk. This overcrowding-induced mortality may not always leave recoverable remains, especially when deaths occur in fringe forest areas.

What the Data Really Tell Us

The claim that 30 tigers have gone "missing" from Ranthambhore Tiger Reserve has stirred concern among wildlife enthusiasts and the general public alike. At first glance, this figure seems alarming—perhaps even indicative of foul play or systemic failure in conservation efforts. However, a closer, data-driven look at the facts reveals a far more nuanced picture. These disappearances, while significant, do not all point to a single cause. Instead, they reflect a complex interplay of natural aging, territorial conflict, dispersal, detection limitations, and, yes, the ever-looming threat of poaching.

First, it's important to dismantle the misconception that many of these tigers were elderly and possibly died of natural causes. While several individuals—such as T3, T13, T38, T41, T48, T74, T79 —were indeed old age individuals, the age group most vulnerable for mortality. There are prime adult tigers, were at the peak of their lives and, should have continued contributing to the population for a few more years. The disappearance of these young adults and prime adult individuals needs to be dealt with utmost care. The sub-adults, which form the dispersal age group, often disperse outside the security of core prime habitat in search of new territories, thus fell victim to anthropogenic causes of mortality and sometimes being killed by dominant tigers in the area, especially in high-density reserves like Ranthambhore. In such encounters, fatal injuries are not uncommon. Others may be pushed to the fringes of the reserve or into adjoining human-dominated landscapes, where threats multiply and monitoring becomes more difficult. One of the missing tigers, T79, had a known history of living outside the protected core area, a factor that significantly increases risk and reduces detection likelihood. That said, it would be irresponsible to ignore the spectre of poaching. While the severity and frequency of poaching in India have decreased substantially since the 1990s and early 2000s, recent incidents suggest that it is far from eradicated. A circular issued by the Government of India in early 2024 raised concerns about a possible uptick in poaching activity and instructed all forest departments to ramp up surveillance and intelligence gathering. Though no physical evidence, such as carcasses or body parts, has surfaced to conclusively link any of Ranthambhore's missing tigers to poaching, the possibility cannot be entirely dismissed. The nature of poaching has evolved; it is often clandestine and opportunistic, making detection increasingly difficult, especially when tigers disappear in remote or fringe areas. Importantly, Ranthambhore continues to be one of the most intensely monitored tiger landscapes in India. The reserve has a strong record of deploying camera traps, field teams, and radio telemetry to keep tabs on its population. Yet even the best monitoring systems have limitations. Not all tigers are equally detectable, some shy away from trails commonly used by dominant individuals, preferring narrow forest paths where camera traps are rarely placed. Moreover, in a reserve with over 60 adult tigers and a challenging terrain, some disappearances are inevitable and may go undocumented for months.

In sum, the disappearance of 30 tigers over several years should be seen not as an indictment of conservation failure but as a reflection of complex ecological realities. While each loss deserves attention, it is critical that public discourse avoids sensationalism and instead embraces a holistic understanding—one that acknowledges natural mortality, territorial conflict,

behavioral variability, dispersal, and the ever-present risk of poaching. Only through such a balanced lens can we accurately interpret the data and guide effective conservation action.

Strengthening the Future: Conservation Recommendations

While the concern for missing tigers is valid, it also provides an opportunity to strengthen conservation mechanisms: 1**. Improve Connectivity**: Establishing and maintaining ecological corridors is critical for safe dispersal. Connecting Ranthambhore to neighboring sanctuaries like Dholpur, Mukundra Hills, Ramgarh Visdhari, Kuno, and Madhav National Park could ease population pressures.2. **Adopt Real-Time Monitoring**: Deploying more GPS collars, especially on dispersing sub-adults, would allow real-time tracking and better intervention during high-risk dispersal events.3. **Enhance Detection Probability**: Maintain the tiger tracking table, where dedicated camera traps should be placed whenever a tiger is not detected for 30-45 days.4. Community Engagement: Local communities in buffer zones must be engaged through conservation-linked livelihoods, conflict mitigation, and wildlife education to reduce anthropogenic threats during dispersal events.5. **Scientific Monitoring**: Research institutions should be engaged in the monitoring of tigers, prey, and their habitat to implement science-driven management actions.

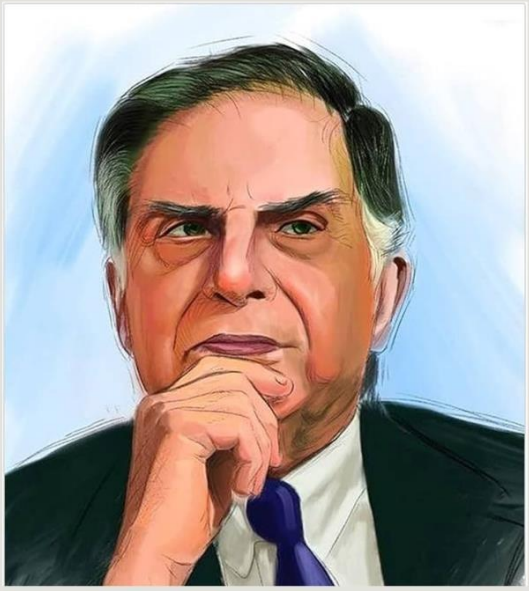
Looking Beyond the Headlines

The narrative of 30 missing tigers from Ranthambhore is not a tale of mystery or failure but one of complexity. It reflects the difficulties inherent in monitoring elusive wildlife in challenging landscapes and highlights the delicate balance that conservationists must strike between population growth and ecological capacity. Rather than alarmism, this should prompt a more nuanced public discourse and policy response, one that invests in science, technology, and collaborative conservation strategies.

About the Author

Dr. Ayan Sadhu is a Scientist at NTCA-WII Tiger Cell, focusing on tiger demography, landscape-level conservation, and carnivore interactions. His research explores population ecology, community dynamics, and wildlife conservation in human-dominated landscapes using tools like camera traps and long-term ecological data. His work advances science-based strategies for large carnivore conservation in India.

THE DEMISE OF RATAN TATA – THE END OF AN ERA



In 2024, India was gripped by unconfirmed reports of Ratan Tata's passing, sparking a nationwide wave of tributes. Revered as an ethical business leader and philanthropist, Tata transformed the Tata Group into a global powerhouse while upholding strong values. Known for humility and quiet generosity, his initiatives in healthcare, education, and disaster relief impacted millions. His quote "I take decisions and then make them right"defined his legacy. From industrialists to citizens, many called him "India's conscience in a suit." Even if news of his death remains unverified, the emotional outpouring reflected a truth: Ratan Tata stands as a symbol of integrity.

The Monk who chose People over Ferraris: Sir Ratan Tata

By Purnendu Agrawal, Soft Skills Trainer at GEU

The Making of a Leader

December 28, 1937, witnessed his birth into the prestigious Tata family. Ratan Naval Tata was raised with privilege, yet with exceptional humility and responsibility. His early years were spent in making morality from an early age. Exceptional academics at Cornell University studying architecture and structural engineering shaped his analytical thinking, which the advanced management program at Harvard Business School further refined. Imagine his early youth spent in learning global business practices while reinforcing the Tata legacy of integrity and excellence. Now, imagine when India was still an underdeveloped country, he could have easily opted to stay out of it. But why did he not? Because his genetics and morality were his driving forces, he returned with dreamy eyes full of Alexandrian dreams for his Indian Business Empire. We can say his beginning was the perfect recipe for Greatness!

On a crisp winter day, December 28, 1937, destiny quietly crafted a chapter in India's industrial history- the birth of **Ratan Naval Tata** into the renowned Tata family. Born into privilege, one might imagine a life of comfort, detachment, and entitlement. But not Ratan. Even as a young boy, he was nurtured in the values of humility, discipline, and an unwavering sense of duty.

In his formative years, while most children were busy with the simple joys of life, Ratan was imbibing the essence of morality, learning the fine balance between power and responsibility. His journey took him across oceans to **Cornell University**, where he studied architecture and structural engineering—not the conventional choice for a business heir, but one that honed his eye for design, structure, and detail. His intellect was further sharpened at the **Harvard Business School**, where he completed an advanced management program, gaining insights into global business trends, leadership, and strategy. What brought him back?

Perhaps it was the legacy in his blood. Perhaps it was the invisible thread of conscience and compassion so deeply stitched into the Tata ethos. He returned to India not just as a businessman but as a dreamer, a builder, and a visionary. His eyes, filled with the quiet fire of **Alexandrian dreams**, saw beyond profit—they saw potential, purpose, and pride. And so, the making of a leader began—not with fanfare, but with foresight. A perfect blend of heritage and humanity, intellect and empathy. If ever there was a recipe for greatness, **Ratan Tata's life** was that and more.

Restoring the pride of India.

There were frowns full of questions when Ratan Tata assumed leadership of Tata Group in 1991, many doubted his ability to guide India's largest conglomerate. Wave after wave of modernizing operations, streamlining subsidiaries, and fostering a culture of innovation left them all spellbound and lauding! Under his stewardship, Tata Group evolved from a dominant national player into a global powerhouse without compromising ethical leadership! Ratan Tata's conquests spread through steel, software, luxury, commercial and consumer vehicles, building the nation through Tata Projects... we can go on and on. Landmark acquisitions like Tetley Tea (UK), Corus Steel (UK), and Jaguar Land Rover (JLR) positioned Tata as a representative of India restoring it to glory! His thoughtful, audacious launch of the Tata Nano, the world's most affordable car, demonstrated his commitment to social innovation. Alas! India could not support his vision of Nano. He was betrayed by his country and corporate arson; had it been you or I with the amount of power, maybe we would have vowed to not think of the masses again. He was built differently; he did not for a minute give up, he pushed his teams to innovate and build better solutions. The modern consumer models of Tata are a witness to his legacy.

Sage of Corporate Responsibility

For Ratan Tata, profit was an instrument to do greater good. He prioritized corporate social responsibility (CSR) long before it became mainstream. The Tata Group's unique structure, with 66% ownership held by philanthropic trusts, never heard before concept, ensured that a majority of profits were funnelled into social welfare. His unwavering stance on ethical business practices, even when it meant sacrificing short-term gains, redefined corporate governance in India and to the world.

What is better than Saving Lives? Empowering lives! So Tata Trusts, revolutionized healthcare to save millions, bringing education to billions, and ensuring rural development across nook and corner of India. His vision of health, safety, economic as well technological empowerment contributed to establishment of premier institutions like the Tata Medical Center and the Indian Institute of Science. His support for global research at Harvard and MIT ensuring our brains ace research, reflects his belief in education as a catalyst for progress.

GIIT: Green Indian Innovation Technology

Ratan Tata's leadership played a pivotal role in India's industrial growth. His innovative approaches made sure his competitors upgrade on technology by integrating global best practices. In short, he elevated India's standing in manufacturing, technology, and infrastructure. Strategic acquisitions showcased India's corporate potential, while Tata Consultancy Services (TCS) and Tata Motors emerged as global leaders. His influence was instrumental in shaping India's economic liberalization and industrial expansion. You name it, he pioneered it- affordable housing to electric vehicles; Ratan Tata has always been a proponent of technological advancement. His emphasis on R&D led to ground-breaking innovations that stand by the brand's legacy of providing smart solutions with smarter prices. Recognizing the power of startups, he invested in disruptive companies such as Paytm and Ola, reinforcing his commitment to innovation-driven progress.

But the monumental fact is that despite his majestic success, Ratan Tata remains grounded-known for his humility, empathy, and resilience. His leadership style prioritizes people, ensuring employees and stakeholders feel valued. Unlike many corporate leaders, he remains approachable and deeply invested in the welfare of those within the Tata ecosystem.

His blend of calculated risk-taking, compassion, and unwavering ethics sets a gold standard for leadership worldwide. Long before sustainability became a global priority, Ratan Tata embedded eco-consciousness into the Tata Group's operations. Initiatives like green steel production, electric mobility, and renewable energy investments through Tata Power highlight his dedication to environmental responsibility. Following the leader's vision, the companies that focused on water conservation and waste management have set benchmarks for sustainable business practices in India.

A Timeless Legacy Carrying the Torch Forward

Even after stepping down as chairman, Ratan Tata's influence endures. The group continued to embrace emerging technologies, digital transformation, and sustainable development while staying true to its core values. His successors remained committed to nation-building, innovation, and ethical leadership, ensuring his legacy lives on. The history of modern India is in deep debt to Ratan Tata's Vision and endeavours. His immaculate leadership, combined with risk-taking for future innovation, has impacted the whole ecosystem of the Indian Corporate diaspora. Represented as the Man of People, his ideals of ethical enterprise and social change go beyond the comprehension of the Wolves of Trade. His life's work has not only reshaped India's corporate world but also uplifted countless lives through philanthropy and innovation. In an age of wealth and power being the only USP understood by the masses, Ratan Tata stands apart—a true icon, a legacy of the Monk who preferred People over Ferarries!

About the Author

Purnendu Agrawal, known as “Trainer Puru” among his students, is a seasoned educator with 15 years of experience in Soft Skills & Personality Training. He has mentored thousands across disciplines, including Engineering, Science, Humanities, and Performing Arts. His SSB Select Plus methodology has guided many into defense forces, and his research explores the future of education.

ISRAEL–PALESTINE CONFLICT

The Israel–Palestine conflict escalated sharply on October 7, 2023, when Hamas launched a deadly assault on Israel, killing 1,200 and taking 200 hostages. Israel responded with a full-scale war in Gaza, causing over 30,000 Palestinian deaths by early 2024. Entire neighborhoods were destroyed. With power and internet cut, medics and militants reverted to using pagers. The humanitarian toll sparked global protests, UN sessions, and ICJ war crimes inquiries. The U.S. backed Israel; others condemned its actions. Amid graphic social media content and misinformation, a Guardian editorial declared: "This is not just a war over territory, but a test of global conscience."

When Old Technology Fails: The Unexpected Pager Mishap

By Dr. Dhruva Chaudhary, Assistant Professor (Antenna and IoT) at DITU
Navneet Bijalwan, Cybersecurity Enthusiast

Do you remember the pagers? Those tiny little machines that buzzed with concise messages before smartphones took over the world. In 2024, they made a surprising comeback to the news headlines not for nostalgia, but for a chilling report of pagers remotely being triggered to explode during the Israel-Palestine conflict. The incident involved the hacking of old pager networks to send malicious signals, causing explosions in devices carried by civilians and soldiers alike, leading to multiple casualties and raising alarms about the potential repurposing of outdated technology in modern warfare.

This was not a scene from a spy film. It actually happened, and many were left wondering: how could something so old be so deadly?

The Two Faces of Technology

Every gadget we create can be utilized in ways we never intended. The pager is a perfect example of this uncomfortable truth-the same traits that make an application beneficial can, under certain conditions, become a tool for destruction. Dr. Anita Mehta, a leading cybersecurity expert, reflected on this, *"This incident is a stark reminder that no technology is too old to be repurposed for malicious intent. It's a wake-up call for the global community to reassess how even outdated devices could be manipulated for warfare."*

Pagers, once a symbol of communication convenience, became dangerous because they were simple, reliable, and often used in high-stakes environments like hospitals or by emergency responders. But in this case, those very qualities were exploited, turning the humble pager into an unsuspected weapon.

Hidden Dangers in Global Technology Supply Chain

When you buy a smartphone or laptop, do you ever pause to think about where each component is sourced? In today's global market, your device likely contains parts from dozens of countries, with software created in even more. Each link in this intricate chain poses a potential security risk. Dr. Elena Rodriguez, a technology policy expert emphasized, “The pager attack highlights serious vulnerabilities in our approach to securing technology across borders. We must

shift our focus from innovation alone to accountability throughout the tech ecosystem."

A single overlooked flaw, an unnoticed vulnerability can be exploited as a weapon. As the pager incident shows, it's not just cutting-edge technology we need to guard against. Even older, seemingly obsolete devices can be repurposed for harm.

When Simple Technology Turns into a Complicated Menace

Col. Rajiv Singh (Retd.), a military analyst, warned, *"We can no longer assume that old technology is safe from exploitation. This attack underlines the need for comprehensive security audits, even for seemingly outdated devices."* The risks posed by this attack aren't isolated to just pagers. It is emblematic of a broader problem: **how do we think about and secure our technology?**

The pager incident provides us with several sobering lessons:

1. **Old Doesn't Mean Safe**: The fact that a technology is old doesn't mean it's harmless.
2. **Disconnected Doesn't Equal Security**: Even devices that are "air-gapped" from the internet can still be vulnerable.
3. **Convenience at the Expense of Security**: The more convenient a technology is, the harder it can be to secure.

Global Security Implications

The pager explosions in the Israel-Palestine conflict not only shocked military experts but raised alarms globally. Modern warfare isn't just about drones or cyberattacks, it's about using any available technology to gain an advantage, even something as seemingly innocuous as a pager. This incident has exposed a crucial flaw in how we view technology in the context of global security.

Countries like China have long recognized the risks associated with relying on foreign technology. Dr. Li Wen, a cybersecurity analyst, explained, "China's push for technological independence is not just an economic strategy, but a crucial measure for national security in an era where the lines between civilian and military technology are increasingly blurred". In response, they have taken significant steps toward achieving technological sovereignty by building their ecosystem of products from semiconductors to social media platforms. This move

allows China to control its technological infrastructure and reduce dependence on foreign suppliers, especially at a time when technology can be weaponized for political or military purposes.

China's approach diverges from the liberal market policies of many Western nations, which often prioritize innovation and open competition, allowing global supply chains to flourish without tight security oversight. In contrast, China has strategically limited foreign technology within its borders, focusing instead on developing homegrown alternatives. This ensures that their systems are more secure and less vulnerable to outside manipulation or sabotage.

In today's interconnected world, even outdated systems, like pagers, can be repurposed for nefarious uses, as seen in the recent pager explosions during the Israel-Palestine conflict. The incident underscores how civilian technology-once benign and routine-can be exploited for military or political gains. **By investing in its own technology, China minimizes such risks, shielding itself from external threats and maintaining tighter control over its digital and technological landscape.**

What This Means for All of Us

The pager attack underscores a sobering reality: no technology is truly immune to misuse. With the rise of complex, connected devices, the risks we face today are not just about stolen information they can disrupt entire infrastructures and harm lives.

However, there's hope: **awareness is the key to protection**. Here are a few practical steps to safeguard yourself in this connected world:

- Ask whether every device you use needs to be "smart" or connected.
- Regularly update your devices with the latest security patches.
- Use strong, unique passwords, and enable two-factor authentication.
- Be skeptical of the security claims made by tech manufacturers.

The Way Forward

This pager mishap is a clear warning that security must be built into every stage of technological development and continuously monitored throughout its lifecycle. It reminds us of the dual nature of technology: while it brings remarkable benefits, it can also be misused in destructive ways. Nadia Farah, a human rights activist, said

it well, *"This attack serves as a grim example of how easily technology can be weaponized to create fear and destruction. We need stronger international agreements to prevent the use of civilian tech as instruments of violence."*

By taking proactive steps in securing our systems and understanding the potential risks, we can enjoy the incredible benefits of modern technology while minimizing our exposure to harm.

In today's digital age, a little caution isn't paranoia-it's smart.

Acknowledgement: The authors are highly thankful to Dr Shachi Negi a spiritualist & teacher and Mr. Aryaman Pokhriyal & Mr. Ekansh Devrani, students of DIT University for their valuable contribution and motivation.

References

1. Mehta, A. (2024). *Interview on Cybersecurity and Technology Risks*. Tech Today.
2. Singh, R. (Retd.) (2024). *Technology and Warfare: An Analysis*. Military Review Journal.
3. Rodriguez, E. (2024). *Global Technology Ecosystems and National Security*. Journal of Technological Policy.
4. Fulton, M. (2024). *The Pagers of War: How Old Technology Becomes Dangerous*. Wired Magazine.
5. Lawson, S. (2024). *Addressing the Global Tech Supply Chain*. Diplomatic Insights.
6. O'Brien, J. (2024). *National Security and the Evolution of Old Tech*. Security Affairs.
7. Farah, N. (2024). *The Ethical Dilemmas of Weaponized Civilian Technology*. Human Rights Today.
8. Wen, L. (2024). *China's Technological Sovereignty and the Role of Domestic Innovation*. TechSecurity Journal.
9. https://www.linkedin.com/pulse/global-security-redefined-impact-international-conflicts-noor-8bv3e/

About the Authors

Dr. Dhruva Chaudhary is currently Assistant Professor-I in the School of Computing, DIT University Dehradun. He has teaching experience of 17 Years at the Undergraduate and Post Graduate levels. His research interest is in the field of Communication, Antenna, and IoT. He is also involved in Academic Management and Administration at the University level.

Navneet Bijalwan, a cybersecurity enthusiast, is currently advancing his expertise through a prestigious certification program at IIT Kanpur and EC-Council. Passionate about securing the digital landscape, he delves into AI/ML applications in threat detection and automated responses, while actively participating in CTFs and contributions to various security communities. His mission is to harness AI to build resilient defences and protect systems from evolving cyber threats.

About the Editor

Dr. Shachi Negi is a media professional, academician, and Sahaja Yoga practitioner dedicated to using storytelling as a tool for social change. With a PhD in English and over 15 years of teaching experience, she brings a unique blend of scholarship and grassroots insight into her work. She is the founder-editor of **Jagriti Media**, a platform committed to amplifying unheard voices and highlighting community narratives from Uttarakhand and outside.

Her research interest lies in the **traditional knowledge systems of Uttarakhand**, with a particular focus on indigenous practices, oral histories, and sustainable lifestyles rooted in the Himalayan region. Dr. Negi has anchored on reputed national news channels and led several research and media projects centered on well-being, indigenous cultures, and youth empowerment.

Her editorial vision for *Beyond the Headlines* is rooted in truth, empathy, and depth, moving past the surface to reveal the real stories that shape our world. She continues to inspire through her work in media, education, and sahaja yoga meditation, guided by a deep commitment to self-realization and collective upliftment.