

# AI and Emerging Technologies for Ethical Governance

TRENDS IN AI & ML

Supported by

**protiviti**<sup>®</sup>  
Global Business Consulting

# TABLE OF CONTENTS

|                                                             |    |
|-------------------------------------------------------------|----|
| Preface                                                     | 3  |
| Foreword                                                    | 5  |
| Introduction                                                | 7  |
| Message                                                     | 9  |
| The AI Continuum: Past, Present, and the Path Ahead         | 10 |
| From Compliance to Confidence: Governing AI with Assurance  | 12 |
| From Detection to Prevention: The AI Advantage in Vigilance | 16 |
| SBI Story                                                   | 26 |
| Leadership Speaks                                           | 28 |



## Preface

Artificial Intelligence (AI) and Machine Learning (ML) are redefining the way Indian industry operates. These technologies are transforming how organizations manage risk, enhance customer experience, and ensure transparency and accountability. By enabling faster insights, predictive analysis, and real-time monitoring, AI and ML are helping banks and financial institutions move from reactive control models to proactive frameworks focused on prevention and assurance.

For the broader industry, AI-enabled vigilance has become a powerful tool to strengthen institutional integrity. It allows early identification of irregularities, minimizes human bias, and promotes continuous oversight. This transition not only reduces instances of fraud and operational lapses but also builds stakeholder confidence and reinforces trust-key ingredients for a resilient financial ecosystem.

At the State Bank of India, we see AI and ML as essential to our pursuit of responsible innovation. Our focus is on augmentation rather than automation-leveraging intelligent systems to empower our people, strengthen vigilance, and enhance service delivery. AI-based analytics and monitoring are already helping us anticipate risks, detect anomalies, and make informed, ethical decisions with greater precision and speed.

This report, prepared in collaboration with Protiviti, reflects of how responsible and transparent use of AI can support ethical governance, strengthen vigilance mechanisms, and enable sustainable growth. Together, technology and trust can drive the next phase of transformation, one that benefits institutions, customers, and the wider economy alike.





**Abhishek Singh**

Additional Secretary, Ministry of Electronics and Information Technology & CEO, IndiaAI Mission & Director General, National Informatics Center

# Foreword

Artificial Intelligence (AI) and Machine Learning (ML) hold transformative potential in strengthening governance and vigilance mechanisms across the public sector. These technologies enable the creation of data-driven systems that can enhance transparency, promote accountability, and reinforce integrity in public administration. The Government of India's vision of "AI for All" emphasizes not only technological advancement but also the responsible and ethical use of AI to ensure that innovation serves as a catalyst for good governance.

In the area of vigilance, AI and ML can play a critical role in detecting irregular patterns in government procurement, identifying potential cases of cartelization, and ensuring the quality and efficiency of goods and services procured. By analysing large volumes of structured and unstructured data, these technologies can surface anomalies that may indicate procedural lapses or risks of collusive practices. The adoption of such intelligent systems can help government institutions transition from reactive vigilance to a preventive and predictive model — one that enables early intervention and continuous oversight.

Equally significant is the potential of AI and ML in enhancing the efficiency of vigilance case management. Through automated document analysis, summarization, and pattern recognition, AI tools can assist in faster and more objective examination of complex cases, thereby reducing delays and improving the quality of decision-making. This not only expedites the disposal of vigilance matters but also ensures consistency and fairness in the process, aligning with the principles of administrative justice and accountability.

The *IndiaAI Mission*, being implemented under the Ministry of Electronics and Information Technology (MeitY), is working to democratize access to AI resources and capabilities, enabling their adoption in governance, industry, and social development. By embedding principles of ethics, fairness, and transparency in AI deployment, the Mission aims to create a trusted ecosystem that leverages technology for public good and national growth.

I would like to acknowledge the efforts of the *State Bank of India* and *Protiviti* for bringing out this insightful report on *AI and Emerging Technologies for Ethical Governance*. The report provides a timely perspective on how emerging technologies can augment vigilance functions, strengthen compliance, and ensure integrity in institutional processes. Such initiatives will play a vital role in advancing the broader national agenda of technology-enabled, transparent, and accountable governance.





**Nitin Chugh**  
Deputy Managing Director &  
Head - Digital Banking, State Bank of India

# Introduction

The rapid integration of data, analytics, and emerging technologies is transforming the way financial institutions operate, deliver value, and engage with customers. Among these technologies, Artificial Intelligence and Machine Learning have moved beyond experimentation to become key enablers of efficiency, security, and personalization across the financial ecosystem.

For the banking sector, these advancements are not merely about adopting new tools, but about building an intelligent, adaptive, and trusted digital framework. AI and ML are helping institutions strengthen fraud prevention, improve credit assessment, enhance compliance, and create more meaningful customer experiences. The transition from traditional, reactive processes to real-time, insight-driven models represents a fundamental step toward resilient and inclusive banking.

This report, developed with the support of Protiviti, draws on their research, insights, and expertise in the areas of risk management, governance, and digital transformation. Their inputs have helped shape this in-depth view of how AI and emerging technologies can contribute to responsible innovation and ethical governance.

As we continue our journey toward deeper digital inclusion, the responsible use of AI and ML will be central to achieving scale with trust. By combining technological progress and strong governance, we can ensure that digital banking continues to evolve in a manner that is secure, transparent, and beneficial for our customers.





**Sandeep Gupta**  
Managing Director  
Protiviti Member Firm for India

## Message

Artificial Intelligence and Machine Learning are no longer distant concepts — they are reshaping how businesses operate, how governments deliver services, and how individuals engage with technology. Across industries, these tools are enabling faster decisions, greater transparency, and more efficient use of resources. But with this progress comes a responsibility — to ensure that innovation is ethical, inclusive, and anchored in trust.

The highlights the growing importance of adopting a balanced approach to technology — one that combines the power of data and with the principles of governance and accountability. The insights shared here reflect how Indian enterprises across industries are beginning to use AI not just for operational gains, but to strengthen compliance and create systems that learn and adapt responsibly.

India stands at a decisive point in its digital transformation. With a thriving innovation ecosystem, a deep talent base, and a strong policy focus, the country has the opportunity to lead in responsible AI adoption. To do so, industry leaders must view AI and ML not merely as tools for efficiency, nonetheless as enablers of sustainable growth, capable of addressing operational challenges while driving business value.

We are pleased to support this effort to document emerging practices and real-world applications that can guide organizations on their AI journey. Our sincere thanks to the State Bank of India for providing the opportunity to advance this important conversation on how technology can serve the larger goals of governance, transparency, and economic growth.

# 1.

## THE AI CONTINUUM: PAST, PRESENT, AND THE PATH AHEAD

Artificial Intelligence (AI) has transitioned from a theoretical concept to a transformative technology that underpins modern innovation trends and techniques. Its evolution reflects decades of research and breakthroughs, beginning with early machine learning and culminating in today's advanced generative and autonomous systems.

### Historical Evolution

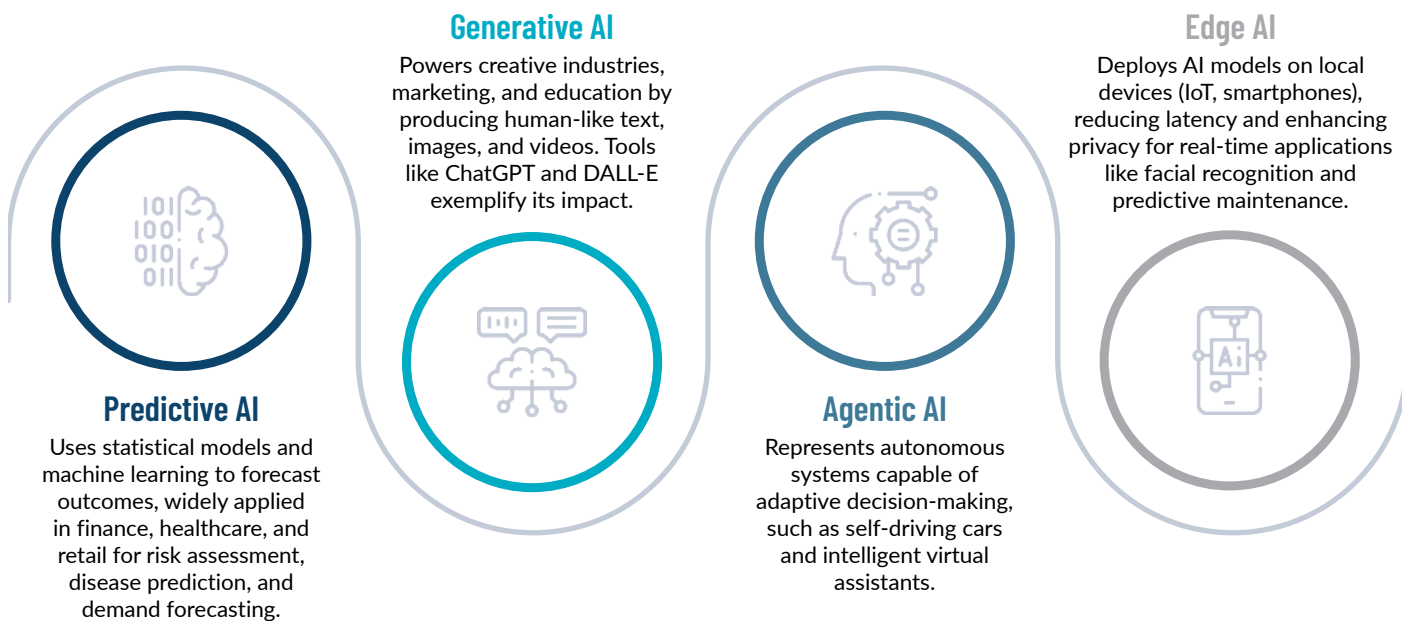
The 1990s marked a turning point for AI, as machine learning and data-driven approaches gained prominence. A landmark event was IBM's Deep Blue defeating chess champion Garry Kasparov in 1997, signalling AI's potential for complex problem-solving. The early 2000s introduced Narrow AI, characterized by task-specific applications leveraging machine learning algorithms trained on large datasets. These systems powered digital assistants like Siri and Alexa, recommendation engines, predictive analytics, and image and speech recognition. Narrow AI became integral to everyday life, enabling language translation, facial recognition, and even early autonomous driving technologies.

The next leap came with deep learning and large-scale neural networks, which dramatically expanded AI's capabilities. Models such as OpenAI's GPT series exemplify this progress, with GPT-4 boasting approximately 1.8 trillion parameters, enabling sophisticated natural language understanding and generative capabilities. These advancements paved the way for Generative AI, which creates text, images, and multimedia content, and Agentic AI, which performs autonomous tasks with minimal human intervention.



## Current Landscape

Today, AI spans multiple paradigms:



## Future Directions

With increasing autonomy, adaptability, and the collaboration between AI and human, the transformation in industry will be significantly visible in terms of benefits through gaining efficiency

and effectiveness. Innovation will be determined by developments in responsible and stringent governance along with explainability, ethical frameworks in controlled environment, and application of generative models

across domains and functions. In order to solve global problems and maintain trust, equity, and long-term societal benefits, AI will be guided by an emphasis on openness, sustainability, and inclusivity.



# 2.

## FROM COMPLIANCE TO CONFIDENCE: GOVERNING AI WITH ASSURANCE

### What is AI Governance?

AI Governance refers to the frameworks, policies, and practices that guide the ethical, transparent, and responsible development and use of artificial intelligence. Governance of AI systems is to ensure that they function as intended, comply with laws, and avoid harmful bias.

Effective AI governance is essential because it builds trust, accountability, and fairness. This lets businesses innovate in a safe and long-lasting way. Without governance, businesses risk financial loss, damaging their reputation, legal implications, and harming users.

### Key Objectives Include:

- **Compliance with emerging AI regulations:** This helps to ensure systems meet current and future legal & industry standards.
- **Risk assessments and robust documentation:** This helps to identify potential risks and maintain detailed audit trails.
- **Transparency, Explainability, and Fairness:** This helps to make AI decisions understandable and equitable.
- **Protection of privacy and prevention of model drift:** This helps to safeguard sensitive data and maintain model reliability over time.

## Key Risks in AI & ML Systems

- **Bias and Fairness:** Training models on biased datasets can reinforce discrimination and biases. Such biases in training data may lead to unfair or unequal outcomes when the model is applied.
- **Data Issues:** If models are trained on incomplete and poor quality of data, their predictions and decisions can be inaccurate or unreliable. This can lead to flawed outcomes and reduce the model's overall effectiveness.
- **Data Protection & Security Risks:** AI systems often need extensive personal data, which increases the potential for data breaches, re-identification, and unauthorized use of sensitive information. It is important to have robust data protection measures and strict access controls to mitigate these risks and maintain user trust.
- **Black-box Nature:** Deep learning models are often difficult to interpret, making it challenging to understand how they reach specific decisions. This lack of transparency can limit trust and accountability in their use.
- **Model Drift & Performance Degradation:** If models are not updated regularly, model performance can decline over time as the underlying data changes, the system may become less accurate and less reliable in its predictions.

## Governance Objectives and Framework

- **Strategic Alignment:** Ensure that AI initiatives are closely aligned with the organization's overall goals and strategy. This helps maximize impact and maintain consistency with business objectives.
- **Internal Risk Assurance:** Organizations should be certain that potential AI risks are appropriately recognised, evaluated, and controlled. This helps maintain system reliability, compliance, and ethical integrity.
- **Responsible AI adoption:** Organizations should encourage the responsible adoption of AI through a structured framework built on **AI strategy, governance, and human oversight**. Ethical considerations and accountability are central to this approach. Developers, auditors, compliance officers, and risk managers are the most critical stakeholders.

## AI Governance Principles

Effective governance emphasizes:

- **Transparency and Explainability:** Organizations should ensure that AI models are interpretable, with clear visibility into the factors influencing decisions and outcomes. By openly communicating these insights, organizations foster trust, accountability, and confidence among stakeholders.
- **Accountability and Oversight:** Accountability makes it possible to oversee, govern, and manage AI results ethically by ensuring that accountability for decisions and actions made by AI systems is precisely defined and attributed.
- **Safety, Security, and Robustness:** Entails thoroughly testing and certifying AI systems to make sure they respect safety, ethics, and human rights. Additionally, it protects the availability, confidentiality, and integrity of data and systems, guaranteeing dependable and resilient operation even in the face of difficult or unforeseen circumstances
- **Fairness, Inclusiveness, and Data Governance:** Organization should ensure that AI systems promote fairness and equality by generating results that are unbiased, equal, and inclusive. Systems should also be designed to protect sensitive data and personally identifiable information (PII), upholding strong data security and privacy standards.
- **Diverse and Representative Data:** Organization should ensure that training data reflects diversity and real-world representation to minimize bias and improve model fairness. The model's overall performance along with the decision making power of the model is strengthened by incorporating balanced datasets from various demographics, regions, and contexts. Applying techniques such as data normalization, re-sampling, or feature correction helps improve model fairness and reduce unintended bias in outcomes.
- **Continuous Output Monitoring:** Organizations should track model predictions in real time or batches to find differences between demographic groups, geographical areas, or situations. Automate bias detection pipelines that flag anomalies or performance gaps.

## Responsible AI Considerations

- **Model Validation & Testing:** Implement extensive validation and testing processes to find vulnerabilities, and performance gaps in large language models (LLMs). Rigorous stress testing, scenario analysis, and adversarial evaluation help ensure reliability, robustness, and trustworthy model behaviour before deployment.
- **Human Oversight:** To guarantee AI systems function as intended and make decisions in line with moral principles and human values, maintain active human involvement. Automated systems cannot accomplish critical judgement, accountability, and contextual understanding without human oversight.
- **Periodic Model Updates:** Organizations should update AI models more frequently using new and high-quality training data to ensure accuracy and efficiency. It is pertinent to leverage MLOps tools and pipelines to streamline version control, automate retraining, and guarantee continuous model improvement.
- **Model Explainability:** Organizations should make sure stakeholders can comprehend the decision-making process by implementing strong practices to improve model explainability. To promote accountability, foster trust, and aid in well-informed decision-making, be transparent about training data, data sources, and potential biases..

- **Data Protection:** A key component of ethical AI is data protection, which calls for stringent safeguards against abuse or illegal access to user data. Strong data governance, anonymization, and access controls are put in place to guarantee that personal data is handled responsibly and to build user trust.

## GenAI Audit Framework

For generative AI, audits should cover:

- **Governance & Compliance:** Organizations would create robust governance structures that assure compliance with legal requirements and moral AI precepts. Maintain data Protection, user consent, and data ownership throughout all operations while coordinating AI practices with changing regulations.
- **Training Data Auditing:** Assess the quality, integrity, and representativeness of training data to maintain fairness and reliability. Apply bias detection, provenance tracking, and preprocessing techniques, and use synthetic data responsibly ensuring it is well-documented, validated, and complements real data to strengthen model auditing and performance.
- **Model Explainability & Transparency:** Organizations to make sure the choices and actions of the model are transparent and traceable. To promote reproducibility and accountability, use explainability techniques, keep outputs transparent, and preserve version control, query logs, and training materials.
- **Output Performance & Accuracy:** Organizations need to evaluate the efficacy and dependability of AI-generated output by comparing it to pre-established benchmarks and using clear evaluation metrics. Use thorough edge case and stress testing to guarantee contextual relevance, logical consistency, and reliable performance.
- **Security & Resilience:** By carrying out thorough adversarial testing and keeping an eye out for data or model loss, organizations can safeguard AI systems against malicious attacks and vulnerabilities. To maintain system integrity, put protections against backdoor attacks in place, enforce rate-limiting for API security, and reduce the possibility of data leaks.
- **Ethical & Societal Impact:** Organization should use safety controls, content moderation, and hallucination detection to make sure AI systems don't spread harm or false information. To encourage confidence, accuracy, and moral use, keep model limitations open and implement end-user protections.
- **Operational & Deployment Audit:** Organizations should use drift detection and real-time monitoring to continuously monitor AI performance in real-world settings. To guarantee accountability, dependability, and long-term model efficacy, include Human-in-the-Loop (HITL) oversight and create explicit legal and liability frameworks.

## Challenges

- **Performance vs Explainability Trade-off:** High-performing “black-box” models such as deep neural networks and ensemble techniques like XGBoost—often deliver superior accuracy but lack interpretability. This creates a natural tension between stakeholders: auditors and regulators prioritize transparency and explainability, while business teams favour models that maximize predictive performance and outcomes.
- **Expertise Gaps:** There is a limited pool of professionals with the combined expertise in AI/ML, ethics, regulation, and risk management needed for effective audits. This cross-disciplinary knowledge gap spanning data science, legal compliance, domain expertise, and software engineering makes comprehensive AI auditing particularly challenging.
- **Technical Complexity:** Many AI models, such as deep neural networks, operate as black boxes offering strong performance but limited explainability, which hinders auditors’ ability to interpret or validate their decisions. Additionally, the lack of standardized, user-friendly audit tools means current solutions often demand advanced technical expertise and significant customization.
- **Accountability & Documentation Gaps:** In complex AI ecosystems, ownership and responsibility are often fragmented across developers, data scientists, business stakeholders, and third-party providers. Insufficient documentation, version control, and audit trails further complicate accountability and limit the effectiveness of comprehensive AI audits.

## Recommendations



## Conclusion

AI auditing is essential for risk reduction, compliance, and trust. Organisations can guarantee AI systems provide value responsibly while defending societal interests by combining governance, ethical principles, and strong audit frameworks.

A hand holding a smartphone, with a blue digital network overlay consisting of interconnected nodes and lines. The background is dark blue with bokeh light effects.

# 3.

## FROM DETECTION TO PREVENTION: THE AI ADVANTAGE IN VIGILANCE

*By leveraging AI, vigilance can shift from a reactive function to a proactive one by identifying and flagging potential issues before they occur and/or before they cause significant damage. However, it requires a strong foundation built on: (a) a very robust ethical framework, (b) transparency with employees about data usage and (c) continued human oversight to ensure fairness, privacy and avoidance of algorithmic bias*

Desiderius Erasmus (1466 - 1536), the Dutch humanist scholar and a leading light of the Renaissance movement during the late 15th and early 16th centuries, is believed to have coined the phrase “**prevention is better than cure**”, in the context of public health, governance and personal well-being. He argued that proactive measures and early intervention are more efficient and effective than later remedies, and that it is less expensive to take steps to prevent a problem from arising in the first place, rather than dealing with the consequences and complexities of a “cure” after the event has taken place.

Similarly, the **Santhanam Committee Report** (submitted in **1964**), which was pivotal in shaping the establishment and functioning of the CVC, **laid significant emphasis on preventive vigilance**.

Vigilance measures can largely be classified into three categories: (a) preventive vigilance, (b) surveillance & detection and (c) punitive vigilance, which are broadly aligned to the concepts of fraud prevention, fraud detection and fraud investigation in the fraud management domain.

**Preventive vigilance** focuses on setting-up a **proactive framework** (systems, procedures and oversight mechanisms), **that can** at a minimum reduce and ideally **eliminate opportunities for misconduct, unethical behaviour and fraud** within an organization. On the other hand, the other two forms of vigilance are largely or completely reactive.

**Surveillance & detection or punitive vigilance (investigation), rather than preventive vigilance, had so far dominated the vigilance and fraud management landscape.** “Accelerated Big Data Analysis” can facilitate the desirable transformation to preventive Vigilance.

## The Big Data Challenge

01

Identification of relevant datasets from big data (exponentially growing data generated from diverse sources, both internal as well as external; structured as well as unstructured).

02

Cleansing and transformation of the datasets.

04

Smart analysis and visualisation of the data to provide actionable insights.

03

Integration of the seemingly unconnected datasets.

05

Optimisation and scaling of the “models” for repetitive deployment.

06

Getting the “models” to be dynamic or “self-learning”.

## The Acceleration Challenge

01

Development of the “models” in a short time window, typically 60 to 90 days.



02

Deploy the models in a manner such that ongoing analyses and the consequent action that need to be taken don't disrupt operations, i.e., typically anywhere between near real-time to 2-3 days (a week at a maximum).



## AI: the game changer

The advent and rapid adoption of AI, and its continuing evolution, is helping surmount the above challenges.

- **Holistic Data Integration:** AI provides a thorough understanding of operations and possible risks by combining data from various, previously isolated internal and external sources.
- **High-Speed, Scalable Analysis:** Massive amounts of structured and unstructured data are processed quickly by AI, which also reduces human error and removes manual bottlenecks.
- **Predictive Risk Management:** In order to forecast risks and facilitate proactive interventions, artificial intelligence (AI) uses machine learning and predictive analytics to find patterns in historical data.
- **Adaptive Threat Detection:** AI continuously learns from fresh data to identify changing fraud schemes and new threats, in contrast to static rule-based systems.
- **Objective Decision-Making:** The accuracy and consistency of risk assessments are improved by AI's fact-based analysis, which reduces human bias.

- **Automation and Efficiency Gains:** Teams can concentrate on strategic and intricate investigations by using AI and RPA to automate repetitive tasks like data collection and compliance checks.

Thus, velocity, frequency and scale, the three key strengths of **Artificial Intelligence (AI)** are enabling rapid and massive automation and **making it possible for organisations to tackle the challenge of “accelerated big data analysis”** and *make the shift from detection to prevention, at an attractive benefit-cost ratio (BCR).*

## Use Cases - Leveraging AI for Preventive Vigilance

Organisations are exploring various opportunities to leverage AI for driving preventive vigilance programs. Listed below are a few interesting examples of AI usage for preventive vigilance that are at various stages of trial and deployment.

- Continuously scan internal emails and chats to identify potential compliance breaches, misconduct or fraudulent activity.
- Monitor transactions or employee activity in real-time, flagging suspicious patterns such as unusual access to sensitive data or a sudden surge of high-risk actions.
- Analyze historical and live email data to predict where future failures, errors or breaches are most likely to occur, allowing for proactive intervention.
- Detect and block advanced malware and other cyber-attacks that are entering via the organisations email systems.
- Automatically review large volumes of emails, contracts or regulatory documents using natural language processing (NLP) to surface potential risks or highlight key clauses that may have been missed.
- Get AI to learn “normal” purchasing and payment behaviours for users (employees) and vendors and then flags outliers on a continuous basis.
- Compare invoice numbers, amounts and vendor details (such as GST numbers) on PDFs (structured data) or images (unstructured data) across different internal systems to prevent duplicate payments.
- Proactively evaluate and continuously monitor supplier performance and financial health using external databases to mitigate risks before they escalate.
- Streamline vendor selection process by evaluating data like financial reports, performance history and compliance with regulations (e.g., ESG standards) and ensuring that only reliable vendors are onboarded.
- Analyse external data (e.g., news feeds, market trends, geopolitical events etc.) in conjunction with internal data, to predict potential supply chain disruptions or supplier insolvency risks and issue early warnings.
- Scan contracts using NLP to ensure all terms and conditions are met, track obligations, and identify potential compliance risks, alerting teams to contract breaches or upcoming renewals.
- Facial recognition and analyses during video interviews to confirm the applicant's identity to prevent impersonation or the use of proxies.
- Analyse a candidate's responses in internal assessments for unusual patterns, such as remarkably fast completion times or identical mistakes as other candidates, which could indicate collusion or cheating.
- Automate routine compliance checks and documentation verification during employee/ vendor onboarding, reducing the risk of human error and ensuring all necessary documentation and background checks are completed and legally sound.
- Compliance chatbots for “live” FAQs and training sessions on code of conduct etc.
- Training and compliance guidance programs to target to high-risk sales & marketing employees who met certain “risk triggers” based on their historic T&E expenses, compliance and business ethics training histories, information on actual sales or sales funnel etc.

## SECTOR SPECIFIC AI TRENDS & IMPACT





## Financial Services

## Selective Use Cases

In the financial industry, artificial intelligence has emerged as a strategic catalyst that is changing how organizations function, compete, and interact with their clientele. Beyond enhancing security and efficiency, AI now drives data-led decision-making and fosters continuous innovation across the value chain. Core applications such as fraud detection, algorithmic trading, and risk assessment have evolved into critical components of financial resilience and growth.

The industry's growing investment in AI reflects a clear shift toward intelligent automation and predictive insight. Financial institutions are attaining greater accuracy, quicker execution, and reduced operational risk through the use of AI-powered chatbots that enhance customer experience and machine learning models that improve fraud prevention, credit evaluation, and compliance.

In the end, integrating AI is changing the financial landscape and not just streamlining procedures. By embedding intelligence into every layer of operation, organizations are building more transparent, scalable, and resilient ecosystems capable of adapting to dynamic market conditions.

- **Financial Fraud Detection:** Financial services are being transformed by AI-powered fraud detection, which makes it possible to use predictive analytics and real-time monitoring to identify suspicious behaviour. Large amounts of transactional data and consumer behaviour are analysed by machine learning models to identify anomalies more accurately and with fewer false positives. These technologies improve customer trust, compliance, and operational efficiency in addition to preventing financial losses. Institutions can now more successfully identify mule accounts and other intricate fraud schemes thanks to cutting-edge tools like MuleHunter.AI from the Reserve Bank Innovation Hub. The speed and accuracy of detection are further improved by ongoing model training and calibration. Overall, AI-driven fraud prevention is helping financial institutions reduce risks, improve decision-making, and build long-term resilience against evolving cyber threats.
- **Customer KYC and Onboarding:** Generative AI models streamline the creation of banking documents such as loan agreements, credit policies, and compliance reports. This automation improves accuracy, consistency, and efficiency while minimizing manual errors. By leveraging these models, banks can conduct more precise KYC assessments, leading to better lending decisions and lower default rates.
- **Personalized Financial Advisory:** AI tools like generative AI, conversational AI, machine learning, and chatbots with natural language processing (NLP) are changing financial advising services by providing tailored advice based on clients' objectives, risk tolerance, and investment preferences. These systems create customised recommendations for retirement planning, budgeting, and investing by analysing past data, market trends, and behavioural patterns. Robotic advisors increase access to wealth management by providing low-cost, data-driven insights that improve portfolio performance and customer acquisition. AI is also used by banks for dynamic customer segmentation, lifetime value prediction, and providing individualised services that foster customer loyalty. In order to improve financial results and optimise strategies, advanced machine learning models further simulate market scenarios.
- **AI-powered Credit Risk Assessment:** AI technology is helping banks and housing finance companies evaluate the creditworthiness of loan applicants more accurately. By analysing large volumes of financial data along with alternative data—such as utility payments and social behaviour—AI provides deeper insights into a borrower's reliability. This approach is particularly valuable for applicants with limited or no credit history, enabling housing finance companies to extend loans to first-time homebuyers and low-income families responsibly, without increasing the risk of default.
- **Automated Claim Processing:** Automotive insurers are leveraging AI technologies like computer vision, video analytics, and machine learning to assess images or videos of vehicle damage submitted by customers or agents. These tools automate the evaluation of damage severity, estimate repair costs, and even facilitate real-time claims processing and adjudication.



## Manufacturing & Industrial Product

AI has changed the industrial and manufacturing sectors by promoting creativity, productivity, and efficiency. Businesses are maximising production, demand planning, R&D, and predictive maintenance while reducing expenses and downtime through intelligent automation, robotics, the Internet of Things, and machine learning. Defect detection, supply chain management, and worker safety are improved by technologies like computer vision, natural language processing, and AI-powered quality control, which raises the caliber of products and boosts operational effectiveness. AI tools also help with cash flow improvement, inventory control, energy optimisation, and streamlined processes like DevOps and contract processing. Manufacturers adopting AI report faster decision-making, measurable cost savings, and strong ROI, often within the first year. Overall, AI is embedding intelligence across the industrial value chain, enabling resilient, scalable, and sustainable operations, with adoption and market growth projected to expand significantly over the next decade.

## Selective Use Cases

- **Quality Control:** By automatically identifying flaws and inconsistencies with greater accuracy than conventional techniques, AI-driven computer vision is transforming quality control. These systems enhance product consistency, expedite inspections, and minimise errors by analysing sensor data and images in real time. This improves the reputation of the brand, guarantees that quality standards are met, and reduces warranty and rework expenses. AI vision systems are scalable across production lines, offer long-term return on investment, and continuously learn to accommodate new defect types.
- **Predictive Maintenance:** Predictive maintenance powered by AI keeps an eye on equipment to spot problems before they arise. Machine learning models identify degradation and possible issues by analysing sensor data and past performance. This proactive strategy lowers maintenance expenses, decreases downtime, and increases equipment life. Optimized servicing schedules, smarter workforce allocation, and efficient spare parts planning further enhance operational efficiency and cost-effectiveness, delivering strong ROI for manufacturers.
- **Robotics and Automation:** AI-powered collaborative robots (cobots) are boosting workforce efficiency by handling repetitive and labour-intensive tasks alongside humans safely. These robots can adapt to new tasks, which improves flexibility, throughput, and precision in contrast to traditional automation. They provide a strong return on investment by lowering labour costs, minimising errors, and increasing overall productivity. By working collaboratively with humans, cobots support dynamic production setups and become increasingly intelligent over time, allowing manufacturers to scale operations without proportionate increases in labour or overhead.
- **Supply Chain Optimization:** AI is transforming supply chain management by enabling accurate demand forecasting, inventory optimization, and improved logistics planning. Machine learning models analyse historical sales, market trends, and external factors like weather or geopolitical events to predict future needs and guide procurement decisions. This lowers stockouts, improves customer satisfaction, and gives manufacturers a significant return on investment. AI also facilitates agile decision-making, simulates supply chain scenarios, and locates bottlenecks. In an increasingly complex global environment, artificial intelligence (AI) improves supply chain efficiency, resilience, and responsiveness by offering real-time insights and predictive analytics.



## Energy, Power, Oil & Gas

### Selective Use Cases

AI is transforming energy, oil & gas, and chemical industries by enhancing efficiency, sustainability, and safety. In oil & gas, AI improves drilling site selection, seismic imaging, and logistics, boosting exploration efficiency. Chemical companies leverage AI for process optimization, faster R&D, and reduced development cycles. Across sectors, innovations like digital twins, computer vision, and AI-powered surveillance improve safety, cut inspection time, and lower labour costs. Overall, AI enables real-time decision-making, resource optimization, and reduced carbon footprint, driving operational efficiency, reliability, and sustainable growth.

- **Smart Grid Management:** By enabling intelligent, autonomous grids that dynamically balance energy supply and demand, artificial intelligence is revolutionising utility services. Compared to legacy grids, agentic AI enables real-time adaptability, optimising the integration of renewable energy sources and minimising waste. By identifying errors, controlling load variations, and enhancing cybersecurity, it increases grid reliability. AI-powered demand response programs help consumers optimize energy use and lower costs. Overall, AI creates more efficient, resilient, and sustainable power systems, accelerating the transition to cleaner energy sources.
- **Predictive Maintenance for Industrial Equipment:** AI-driven predictive maintenance is transforming asset management across oil refineries, plants, and energy utilities. By analysing sensor data, machine learning models detect irregularities and forecast equipment failures, minimizing unplanned downtime and cutting maintenance costs while extending asset life. This proactive method boosts reliability and safety, enabling companies to optimize operations and increase profitability, and is quickly becoming a global standard in energy-intensive industries.
- **Optimized Energy Demand Forecasting:** Accurate demand forecasting is crucial for balancing supply and demand in the energy and utilities industries. Better generation planning, less waste, and a steady supply are made possible by AI's ability to forecast energy needs using weather patterns, consumption trends, and grid data. AI forecasts solar and wind output in renewable energy by analysing weather data, facilitating smooth integration with traditional grids. AI improves fuel supply management and logistics for the oil and gas sector, lowering carbon emissions, saving money, and bolstering the energy infrastructure's resilience.
- **Renewable Energy Optimization:** By analysing local environmental data in real time, Edge AI improves the performance of wind turbines and solar panels, allowing for smart adjustments that increase energy output and reduce operating costs. Unlike traditional systems that struggle to adapt to changing conditions, AI-driven optimization ensures continuous, responsive efficiency.



## Healthcare & Pharmaceutical

AI is transforming healthcare and pharmaceuticals through advanced diagnostics, predictive analytics, and personalized medicine, delivering faster, more accurate, and more tailored patient care. Hospitals use AI to manage records, monitor patients remotely, and streamline administrative tasks like billing and coding, significantly reducing errors and costs. In diagnostics, AI is now embedded in many FDA-approved tools, particularly in radiology, improving detection of conditions such as tumors and strokes, while early-warning systems catch critical illnesses like sepsis with high precision.

In drug discovery, AI cuts development timelines and costs exponentially, enabling breakthroughs in treatments for diseases like Parkinson's. Personalized care tools—from prognostic tests that spare patients unnecessary chemotherapy to AI-powered health apps that design diet, fitness, and mental wellness plans—are improving outcomes and quality of life. Healthcare systems are improving care delivery, particularly in underserved areas, by combining explainable AI, secure data handling, conversational tools, and real-time monitoring to create scalable, accessible solutions.

## Selective Use Cases

- **Hospital Operations Optimization and Patient Support:** By automating processes like admissions and forecasting bed demand, AI is simplifying hospital operations and freeing up healthcare professionals to concentrate more on patient care. While wearable technology and virtual assistants track health in real time and notify doctors of possible issues, conversational AI chatbots provide round-the-clock assistance by responding to medical questions and reminding patients to take their medications.
- **Medical Imaging and Diagnostics:** AI-powered tools are revolutionizing medical imaging by accurately detecting abnormalities in X-rays, MRIs, CT scans, and pathology slides, matching the expertise of seasoned radiologists. Deep learning models can identify tumours, fractures, infections, and degenerative diseases early—often before symptoms emerge—helping clinicians prioritize urgent cases, reduce errors, and accelerate workflows. Already applied in fields such as breast cancer screening and retinal analysis, these systems deliver timely, precise interpretations that enhance diagnostic confidence and improve patient outcomes.
- **Drug Discovery and Development:** AI is transforming drug discovery by analysing vast biomedical and chemical datasets to identify promising targets and design effective compounds. It speeds up early research by using molecular simulations and protein structure prediction, while AI tools assess the safety and effectiveness of drugs prior to clinical trials. Natural language processing streamlines candidate selection and reduces trial-and-error by extracting insights from trial data and scientific literature. This approach shortens discovery timelines, cuts R&D costs, and enables safer, more effective treatments. The pharmaceutical industry is also leveraging AI for drug repurposing—finding new uses for existing medicines—and to predict viable drug molecules before lab testing, a breakthrough that significantly accelerated COVID-19 vaccine development.
- **Early Intervention & Predictive Care:** AI-driven predictive analytics help forecast disease progression, readmission risks, and treatment outcomes by analysing patient data, lab results, and lifestyle factors, enabling early interventions and personalized care for chronic conditions like diabetes and heart disease. These tools improve outcomes, optimize resources, and lower costs, making predictive AI central to proactive healthcare. Similarly, AI models that analyse historical air quality data can predict pollution levels, identify high-risk areas, and, through real-time sensor monitoring, enable timely actions to safeguard public health.



## Retail & Consumer

### Selective Use Cases

AI is transforming retail and e-commerce by driving personalization, dynamic pricing, and supply chain optimization. Retailers are leveraging AI to enhance customer experience, streamline operations, and boost efficiency. From recommendation engines that analyze past purchases and browsing behavior to suggest tailored products, to AI-powered checkout systems and chatbots that resolve most customer inquiries, these innovations are reshaping the shopping journey.

AI also strengthens backend operations—improving inventory accuracy with image recognition, reducing stockouts, and optimizing logistics. Brand loyalty, average order values, and sales conversions have all increased as a result of personalisation initiatives. With the use of tools like GPT-4o and LangGraph, advanced AI platforms now provide automated customer support, agentic AI for discoverability, and natural language search, lowering manual workloads and providing brand-consistent responses. Voice agents add further value by automating services like hotel reservations with real-time integration, multilingual capabilities, and upselling, leading to higher revenues and 24/7 engagement. With adoption accelerating and investment rising, AI has become a critical strategic asset for shaping the future of retail and e-commerce.

- **Smart Supply Chain and Logistic Optimization:** By anticipating delays, streamlining routes, controlling risks, and automating warehouses, artificial intelligence is transforming supply chains. Machine learning improves efficiency and lowers costs by predicting demand, identifying shipment problems, and directing prompt fixes. AI improves last-mile delivery, increases warehouse productivity through robotics, and promotes sustainable operations in retail and FMCG. Demand planning, inventory optimisation, and real-time decision-making are all done by Indian FMCG companies using AI and IoT technologies, which improves customer service and speeds up turnaround.
- **Personalized Marketing and Customer Experience:** AI enables highly personalized marketing by analysing customer, transaction, and product data, along with basket analysis, to deliver tailored offers, recommendations, and messaging. Machine learning models help businesses improve customer retention by enhancing experiences that boost conversions, basket size, and engagement metrics. AI-driven personalisation boosts ROI, builds loyalty, and is a crucial differentiator in the CPG industry. AI-powered recommendation systems increase engagement, improve conversion rates, and increase return on advertising investment by recognising dynamic customer segments and intricate purchasing patterns.
- **Price Optimization and Dynamic Pricing:** AI-powered pricing engines analyse competitor strategies, demand patterns, seasonality, and customer segments to recommend optimal pricing actions. By enabling dynamic pricing, smarter promotions, and markdown optimization, they help retailers and consumer goods companies boost sales, protect margins, and clear inventory efficiently. By enabling targeted campaigns and responsive pricing strategies that improve sales performance, inventory turnover, and profit management, these systems instantly modify prices in response to changes in the market and consumer purchasing patterns.
- **CPG Product Innovation:** Artificial Intelligence is transforming product innovation in the Consumer Packaged Goods (CPG) sector by enabling faster, data-driven decision-making across the innovation lifecycle. AI analyzes vast consumer, market, and social data to uncover emerging trends, unmet needs, and preferences. It accelerates concept development through predictive analytics, simulates product formulations for optimal taste or texture, and enhances packaging design using image recognition and sustainability modeling. Machine learning also supports demand forecasting, reducing time-to-market and minimizing product failure risk. Overall, AI empowers CPG companies to create smarter, consumer-centric innovations that align with evolving market dynamics and sustainability goals.



## Automotive

### Selective Use Cases

AI is revolutionizing the automotive industry, driving advances in autonomous vehicles, ADAS, predictive maintenance, and connected mobility. From self-driving cars and intelligent manufacturing lines to real-time defect detection and faster software development, AI is boosting safety, efficiency, and quality across the sector.

On the road, AI powers adaptive cruise control, obstacle detection, and automatic braking to prevent accidents, while predictive maintenance keeps vehicles in top condition. Connected technologies reduce congestion and improve safety through data sharing, and in-car AI provides personalized settings, voice assistance, and driver attention monitoring—transforming the entire driving experience.

- **Autonomous Vehicles:** AI uses deep learning, computer vision, and sensor data from cameras, LiDAR, and radar to allow cars to sense, make decisions, and navigate on their own. While current features like adaptive cruise control and lane-keeping assistance pave the way for full self-driving capabilities, it also lowers human error, improves safety, and lowers logistics costs.
- **Predictive Maintenance for Fleet and Vehicles:** Real-time vehicle health monitoring is facilitated by AI-driven predictive maintenance, which uses sensor data and onboard diagnostics to foresee component failures before they occur. This enables fleet managers and manufacturers to prolong vehicle lifespan, optimise maintenance schedules, and reduce breakdowns. Reduced expenses, higher uptime, and enhanced customer satisfaction are among the advantages. Predictive maintenance as a service increases post-purchase engagement and creates new revenue streams for OEMs. By identifying early failure trends, lowering claims, and improving product reliability, these systems also improve warranty management.
- **Connected Vehicle Services and Personalization:** By examining user habits, preferences, and driving patterns, artificial intelligence (AI) provides connected cars with customised infotainment, navigation, and driver assistance. This makes it possible for customised recommendations, flexible settings, and improved security features. Through subscription services, it increases engagement, fortifies consumer loyalty, and creates new revenue streams for automakers. While vehicle-to-everything (V2X) communication maximises traffic flow and road safety, AI-driven insights enhance product design, marketing tactics, and service offerings.. As cars become increasingly software-defined, AI-powered personalization is emerging as a key differentiator in a highly competitive market.
- **Safety Systems:** Safety technology has advanced rapidly, bringing powerful new features that strengthen driver assistance and overall road safety. ADAS, which includes features like lane departure alerts, forward collision warnings, and cross-traffic detection, is now standard on modern cars. To provide safer and more responsive driving experiences, these features rely on radar sensors and AI-driven data analytics.

# 4.

## SBI STORY AI/ML JOURNEY

The State Bank of India's (SBI) Artificial Intelligence and Machine Learning (AI/ML) journey marks its transition from traditional banking practices to a technology-led financial institution. The Bank has systematically evolved from manual, paper-based operations to a digitally intelligent enterprise that leverages AI/ML for predictive insights, operational efficiency, and strategic decision-making.

In the **early years (1990s–2008)**, SBI's operations were largely manual, driven by physical documentation and decentralised systems. Computerisation began with Bank Master, followed by Core Banking implementation, which centralised operations. The **Digital Banking Era (2000–2018)** saw the launch of Internet Banking, YONO, and Customer Relationship Management platforms, supported by a Data Warehouse that enabled descriptive analytics. From **2018 onwards**, the focus shifted to AI/ML-driven banking, where models support predictive and optimisation-based decision-making across marketing, lending, risk, and customer service functions.

SBI's formal analytics journey began in 2013 with the creation of a dedicated Analytics Department. Within a few years, it matured into a fully in-house, enterprise-grade function supported by open-source tools and lateral industry recruitment. Today, the team comprises over sixty specialists managing more than 140 AI/ML models that span all major business areas. These initiatives have yielded tangible impact, contributing approximately ₹1.2 Lakh Crore in advances during FY 2025, while maintaining strict data protection and governance through an entirely in-house architecture.

AI/ML applications at SBI cover six key areas: advances growth, digitisation, NPA management, fraud and risk, customer experience, and cross-sell. The Bank's Pre- Approved Personal Loan (PAPL) platform exemplifies end-to-end digital lending with instant approval. Risk mitigation is strengthened through Early Warning Signal models and the patented "High-Risk Branches" framework that detects operational anomalies. Fraud detection and Anti-Money Laundering (AML/CFT) systems employ AI-based alert prioritisation, improving analyst efficiency.

Operational efficiency models, such as Cost-to-Income and Footfall Reduction, help optimise resource allocation and workload distribution. Customer personalisation is achieved through recommendation engines that suggest financial products based on behavioural and transaction data.

SBI's foray into **Generative AI (GenAI)** began with the launch of the AskSBI chatbot, which uses Retrieval-Augmented Generation (RAG) and Large Language Models (LLMs) to provide accurate responses to more than 2.2 lakh employees, referencing a repository of 14,000 internal documents. The system runs on a secure hybrid cloud and forms the foundation for future customer-facing GenAI applications.

The Bank's AI/ML success rests on three pillars: robust infrastructure, a data-driven culture, and responsible governance. A centralised data ecosystem—comprising a next-generation data warehouse and data lake integrating more than 80 source systems—supports seamless data flow. The use of open-source frameworks such as Python, TensorFlow, and Prophet ensures scalability within a secure, on-premises and private-cloud environment. Cultural transformation is reinforced through continuous upskilling initiatives and research collaborations, including a 2023 partnership with IIT Bombay for advanced data science research and capacity development.

Governance remains a cornerstone of SBI's AI strategy. The board-approved *Responsible AI and Model Governance Document* (July 2023) and the *Fairness, Ethics, Accountability and Transparency (FEAT)* framework define clear standards for model development, validation, and monitoring. Independent testing, back-checking, and bias audits are mandated, especially for high-stakes use cases like credit assessments. Additionally, the *AI Based Emerging Technologies Policy* extends oversight to Agentic and Autonomous AI systems, ensuring responsible innovation within a regulated, ethical framework.

In essence, SBI has successfully institutionalised AI/ML as a core business enabler. With secure infrastructure, ethical governance, and continuous innovation, the Bank stands as a benchmark in the integration of advanced analytics and Generative AI within enterprise-scale financial systems.

# 5.

## LEADERSHIP SPEAKS





Criminal are fast adopting AI in their pursuits, AI presents a great opportunity to Law Enforcement to up their game and become more effective.

Rajesh Kumar  
IPS, CEO, i4C (Indian Cyber Crime Coordination Centre)



“AI can detect anomalies, but only vigilant humans can correct the course. Corruption hides in complexity, yet AI uncovers it with clarity and brings out the truth—reminding us that while technology illuminates the path, it is human integrity that ensures we walk it.”

Manish Malik  
Executive Director (Information Systems, IOCL)



“Through digital transformation and integration of AI/ML into our vigilance frameworks, we move from reactive audits to proactive insight. This shift empowers AIIMS to detect anomalies early, streamline decision-making, and safeguard institutional integrity.

Dr. M Srinivas  
Director, AIIMS



In my opinion, when used responsibly, AI helps improve transparency and that makes the society more vigilant. A vigilant society aides nation building.

Murali Jagannathan  
Assistant Professor, IIT Madras



In a rapid transition of the Human Intelligence Eras from Millennials to Gen Z, Gen Alpha and further to Gen Beta where Artificial Intelligence and Machine Learning have outpaced thier counterparts and infact become the key drivers of exploration of knowledge and technology across the 360 degrees spectrum, We all as the Government, the Private Entities and associated stakeholders need to be well equipped and at sync with the latest trends for Ease of Business, Acceptability and Enhanced Customer Centricity so that the World dwells in a harmonious phase of resonance amidst Prosperity, Peace, Fraternity and Technological advancement where Humans at the Core orchestrate the role of responsible, collaborative and sustainable Growth.

Sh. Rahul Himalian  
Director (T & M), IRCTC





AI is transforming how businesses operate and engage the world, delivering the power of prediction to augment human decision making. However, humans must be able to trust predictive recommendations and outcomes for AI to realize its full potential. Organizations who want to employ AI have a fundamental responsibility to foster trust in the technology. Putting responsible AI principles into practice is critical as it enhances vigilance within the organisation ensuring the right checks and balances throughout the AI lifecycle. Hence, IBM has made trust the cornerstone of our leadership in AI innovation. We follow a human-centered approach to trustworthy AI, putting ethical principles at the core of our governed data and AI technology, and foster an open and diverse ecosystem to ensure that AI technology benefits everyone, not just a few.”

Geeta Gurnani  
**IBM Technology CTO & Technical Sales Leader, India & South Asia**



AI enhances audit and vigilance by automating anomaly detection, ensuring real-time monitoring, improving fraud identification, and enabling predictive risk analysis.

It reduces human error and strengthens internal controls for more transparent and efficient governance.

Mohit Kapoor  
**Group Chief Technology Officer, Mahindra & Mahindra**



The convergence of data, AI, and ML is not just a technological shift but a strategic imperative to strengthen transparency, fairness, and ethical governance.

Thoughtful integration of AI-driven insights enables proactive decision-making, fosters trust, and upholds integrity across all operations.

ONGCs digital transformation journey is reinforcing our dedication towards safety, sustainability, and ethical excellence—ensuring that technology serves as a force for accountability and public trust in every aspect of our business.

Vinod Kumar Chaudhary  
**Executive Director - Chief Infocom Officer ONGC**





Artificial intelligence is no more a niche technology segment and is not prevalent in our daily lives. From that friendly voice of your e-commerce agent helping you through a dispute to payment that has just been flagged with a warning are all a form of AI at works. With this massive transformation at play, there are also threats scrupulous elements who turn to use AI to their advantage for scamming. Vigilance framework needs to stay ahead using same technology frameworks that AI brings to create efficiency.

Artificial intelligence is now exploring dimensions beyond our imagination and is invading in every aspect of our daily routines. It has just about started showing signs of building efficiency in all tasks we do as humans. Excited to explore and look forward to an interesting interaction.

Nitin Mishra  
Executive Director, Tech, NPCI



AI and ML are transforming the world's largest public health assurance scheme, from reactive fraud control to proactive integrity management ensuring transparency, accountability, and equity in every citizen's healthcare journey.

Dr. Sunil Kumar Barnwal  
CEO, National Health Authority

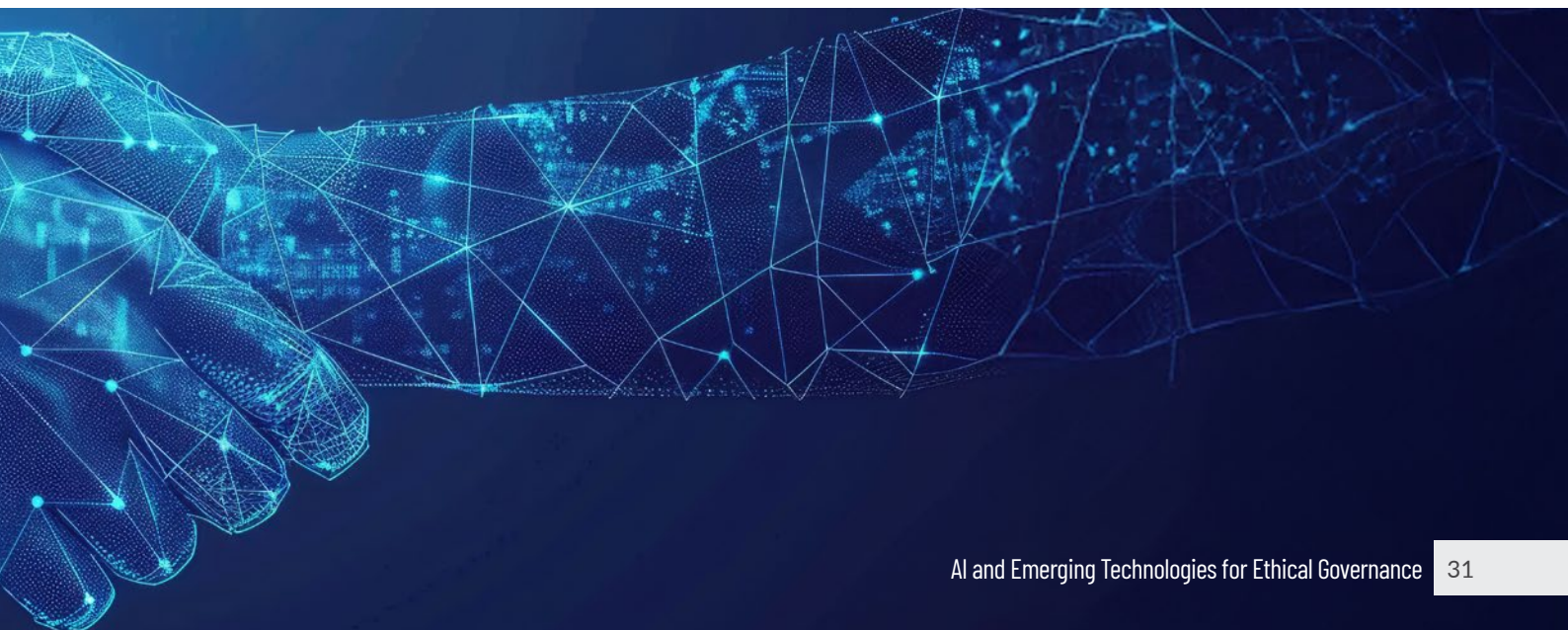


India banking industry is increasing adopting AI & ML to drive operational excellence and fraud risk management. SBI uses AI/ML tool for identification of High-Risk Branches for Preventive Vigilance and Risk mitigation, apart from other areas.

The AI/ML predictive model assesses credit and operational risk in branches and provide a robust mechanism for risk control. It also defines the inherent fraud risk based on advances/transactions characteristics of the bank branches.

The model captures patterns of the outlier activities for arriving the final risk of the branch as High risk/Medium Risk/Low Risk. It helps in reducing the fraud incidents by enabling branches and controlling offices to take proactive preventive risk mitigating measures against the identified reasons occurring in the branches.

Ajit Kumar Rath  
Chief Vigilance Officer, State Bank of India



# About Protiviti

Protiviti ([www.protiviti.com](http://www.protiviti.com)) is a global consulting firm that delivers deep expertise, objective insights, a tailored approach and unparalleled collaboration to help leaders confidently face the future. Protiviti and its independent and locally owned member firms provide clients with consulting and managed solutions in finance, technology, operations, data, digital, legal, HR, risk and internal audit through a network of more than 90 offices in over 25 countries.

Named to the Fortune 100 Best Companies to Work For® list for the 11th consecutive year, Protiviti Inc. has served more than 80 percent of *Fortune* 100 and nearly 80 percent of Fortune 500 companies. The firm also works with government agencies and smaller, growing companies, including those looking to go public. Protiviti Inc. is a wholly owned subsidiary of Robert Half (NYSE: RHI).

## Key Contacts

### Sandeep Gupta

Managing Director  
[Sandeep.Gupta@protivitiglobal.in](mailto:Sandeep.Gupta@protivitiglobal.in)  
+91 9702730000

### Sachin Tayal

Managing Director  
[Sachin.Tayal@protivitiglobal.in](mailto:Sachin.Tayal@protivitiglobal.in)  
+91 9811999076

### Nirmalya Gupta

Managing Director  
[Nirmalya.Gupta@protivitiglobal.in](mailto:Nirmalya.Gupta@protivitiglobal.in)  
+91 9945134099

### Ajay Malik

Managing Director  
[Ajay.Malik@protivitiglobal.in](mailto:Ajay.Malik@protivitiglobal.in)  
+91 9987071312

### Dhrubabrata Ghosh

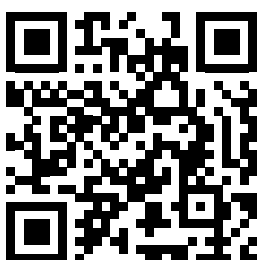
Managing Director  
[Dhrubabrata.Ghosh@protivitiglobal.in](mailto:Dhrubabrata.Ghosh@protivitiglobal.in)  
+91 9739546661

### Suprabhat N M

Managing Director  
[Suprabhat.NM@protivitiglobal.in](mailto:Suprabhat.NM@protivitiglobal.in)  
+91 9820180564

### Kallol Kumar

Senior Director  
[Kallol.Kumar@protivitiglobal.in](mailto:Kallol.Kumar@protivitiglobal.in)  
+91 9830087931



# Protiviti India Offices

## Ahmedabad

6th Floor, West Gate, E-Block,  
Near YMCA Club, SG Highway,  
Ahmedabad – 380 015 Gujarat, India

## Bengaluru

1, 9th Floor, Umiya Business Bay,  
Cessna Business Park, Outer Ring Road  
Kadubeesanahalli, Varthur Hobli  
Bengaluru – 560 049  
Karnataka, India

## Bhubaneswar

1st Floor, Utkal Signature, Chennai-Kolkata  
Highway Pahala, Bhubaneswar  
Khordha – 752 101  
Odisha, India

## Chennai

10th Floor, D Block, North Side,  
Tidel Park No. 4, Rajiv Gandhi, Salai,  
Taramani, Chennai – 600 113  
Tamil Nadu, India

## Coimbatore

TICEL Bio Park, 11th Floor Somaiyapalyam Village,  
Anna University Campus, Maruthamalai Road,  
Coimbatore North Taluk, Coimbatore – 641 046  
Tamil Nadu, India

## Gurugram

15th & 16th Floor, Tower A, DLF Building No. 5,  
DLF Phase III, DLF Cyber City,  
Gurugram – 122 002  
Haryana, India

## Hyderabad

Q City, 4th Floor, Block B, Survey No. 109, 110 &  
111/2 Nanakramguda Village Serilingampally  
Mandal, R.R. District Hyderabad – 500 032  
Telangana, India

## Kolkata

10th & 16th Floor, PS Srijan Corporate Park,  
Tower - 1, Plot No. 2 Block - EP & GP Sector-V,  
Bidhannagar, Salt Lake Electronics Complex  
Kolkata – 700 091,  
West Bengal, India

## Mumbai - Goregaon

13th Floor, The Westin Garden City, Commerz  
1- International Business Park, South Side,  
Behind Oberoi mall, Goregaon, Mumbai – 400063  
Maharashtra, India

## Mumbai - Sion

1st Floor, Godrej Coliseum  
A & B Wing, Somaiya Hospital Road  
Sion (East) Mumbai – 400 022  
Maharashtra, India

## Noida

14th & 16th Floor, Windsor Grand,  
1C, Sector – 126, Noida  
Gautam Buddha Nagar – 201313  
Uttar Pradesh, India

## Notes

[illegible]

## Notes

[illegible]

#### State Bank of India

This publication has been prepared for general information purposes only. The information, statements, and opinions contained herein are based on sources and data believed to be reliable at the time of publication; however, **State Bank of India (SBI)** makes no representation or warranty, express or implied, as to the accuracy, completeness, or reliability of any information or opinion contained in this document. The contents of this document are not intended to constitute professional, financial, or legal advice. Readers are advised to exercise their own judgment and seek independent professional advice before making any decisions based on the information contained herein. SBI and its officers, employees, and agents expressly disclaim any and all liability arising from or in connection with the use of this publication or any action taken in reliance upon its contents. SBI also reserves the right to amend, modify, or update any information contained in this document without prior notice.

© 2025 State Bank of India. All rights reserved.

---

#### Protiviti India Member Private Limited

This publication has been carefully prepared, but should be seen as general guidance only. You should not act or refrain from acting, based upon the information contained in this publication, without obtaining specific professional advice. Please contact the person listed in the publication to discuss these matters in the context of your particular circumstances. Neither Protiviti India Member Private Limited nor the shareholders, partners, directors, managers, employees or agents of any of them make any representation or warranty, expressed or implied, as to the accuracy, reasonableness or completeness of the information contained in the publication. All such parties and entities expressly disclaim any and all liability for or based on or relating to any information contained herein, or error, or omissions from this publication or any loss incurred as a result of acting on information in this presentation, or for any decision based on it.

© 2025 Protiviti India Member Private Limited

*Face the Future with Confidence<sup>®</sup>*