

Growing Role of AI in Foreign Trade

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WHY AI MATTERS FOR INDIAN FOREIGN TRADE

- India's push towards \$2 trillion exports by 2030
- Complexity of global trade regulations and tariffs
- Need for speed, accuracy, and risk mitigation in trade decisions
- Integration with Digital India, Make in India, and Gati Shakti

KEY AI TECHNOLOGIES IN TRADE

- Machine Learning (ML) for pattern recognition
- Predictive analytics for demand and price forecasting
- Natural Language Processing (NLP) for trade documentation
- Computer Vision for cargo inspection and fraud detection

AI ACROSS THE TRADE VALUE CHAIN

- Pre-trade: Market intelligence, partner discovery
- At-border: Customs risk profiling, clearance automation
- Post-trade: Trade analytics, dispute resolution, policy feedback

INDIAN USE CASES AND INITIATIVES

- AI-driven customs risk management systems (RMS)
- ICEGATE (Indian Customs Electronic Data Interchange Gateway) and faceless assessment using data analytics
- Directorate General of Foreign Trade (DGFT) trade data analytics for export promotion
- AI in port operations (JNPT, Vizag Port digitisation)

AI FOR TRADE COMPLIANCE AND RISK MANAGEMENT

- Automated Harmonized System (HS) code classification
- Sanctions and embargo screening
- Fraud and mis-invoicing detection
- Environmental Social and Governance (ESG) and carbon-border compliance monitoring (EU Carbon Border Adjustment Mechanism CBAM: Full implementation from 2026)

TRAINING COMPONENT I – PREDICTIVE ANALYTICS FOR FOREIGN TRADE

- Focus: Forecasting, planning, and policy anticipation
- Trade demand and export trend forecasting
- Price volatility prediction for commodities (steel, textiles, agri-exports)
- Tariff and non-tariff barrier impact simulations
- Scenario analysis for FTAs (India–EU, India–UAE, India–UK)
- Hands-on Exposure (Conceptual):
 - Reading dashboards and forecast outputs
 - Interpreting AI-generated trade insights for decision-making

TRAINING COMPONENT 2 – AI FOR TRADE OPERATIONS & GOVERNANCE

- **Focus:** Practical adoption in institutions and firms
- AI-assisted customs clearance workflows
- Automated documentation and error detection
- Trade data dashboards for ministries and exporters
- Ethical, legal, and data governance considerations
- **Skill Outcomes:**
 - Ability to evaluate AI tools for trade use
 - Understanding human–AI collaboration in trade governance

CAPACITY BUILDING NEEDS IN INDIA

- Upskilling trade officers and export managers
- Data literacy for trade policy professionals
- Interdisciplinary training (economics + data + law)
- Public–private–academic collaboration

CHALLENGES AND RISKS

- Data quality and interoperability issues
- Algorithmic bias in risk profiling
- Cybersecurity and trade data sovereignty
- Over-reliance on automated decision systems

WAY FORWARD FOR INDIA

- National AI strategy aligned with trade policy
- Indigenous AI tools for trade intelligence
- Regional trade data sharing frameworks
- Continuous training and institutional learning

CONCLUSION

- AI is moving foreign trade from reactive to predictive
- Strategic adoption can enhance India's global trade positioning
- Human expertise remains central in AI-driven trade systems

THANK YOU

