Vishnu Waman Thakur Charitable Trust's

VIVA Institute of Technology

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And Affiliated to University of Mumbai

NAAC "B++" Grade

Department of Electronic & Telecommunication Engineering

Topic Name:	Guest Lecture on AI in stock market prediction & algorithm trading
Name of the Guest Speaker:	Mr. Nikhil Naidu
Designation:	Tech Lead
Organization/Institution:	Corpcare Investment Advisory pvt. Ltd.
Date & Time	27th March 2026, 10 am – 11 am
Number of Students:	14

Programme Summary / Details:

The Department of Electronics & Telecommunication Engineering, VIVA Institute of Technology, organized an expert session on " AI in stock market prediction & algorithm trading " on 27th March 2026.

The session was organized to help students understand the importance of long-term career planning in the AI field. The session focused on building strong fundamentals, developing relevant skills, and making informed career decisions instead of blindly following short-term trends.

Artificial Intelligence (AI) has transformed the financial sector, especially stock market analysis and trading. Traditional methods relied on human judgment and basic statistical tools, whereas AI uses advanced algorithms, data analytics, and machine learning to predict market trends and automate trading decisions. AI enables faster, data-driven, and more accurate decision-making, making it a crucial component of modern financial markets.

Role of AI in Stock Market Prediction

AI models analyze large volumes of structured and unstructured data to forecast stock prices.

Key Data Sources Used

- Historical stock prices
- Financial statements
- News articles and social media sentiment
- Economic indicators
- Global events

Techniques Used

- **Machine Learning (ML):** Learns patterns from historical data
- **Deep Learning:** Uses neural networks for complex predictions
- **Natural Language Processing (NLP):** Analyzes news and sentiment
- **Time Series Analysis:** Predicts future prices based on past trends

Example

Companies like Google and Microsoft use AI models to analyze financial trends and optimize trading strategies.

Algorithmic Trading (Algo Trading)

Algorithmic trading uses computer programs to execute trades automatically based on predefined rules.

How It Works

1. AI model analyzes market data
2. Identifies trading opportunity
3. Executes buy/sell orders instantly

Types of Algorithmic Strategies

- Trend following strategies
- Arbitrage opportunities
- Market making
- High-frequency trading (HFT)

AI Techniques in Algorithmic Trading

a) Supervised Learning: Predicts stock prices using labeled data

b) Reinforcement Learning: Learns optimal trading strategies through trial and error

c) Neural Networks: Detect complex nonlinear relationships

d) Sentiment Analysis: Uses NLP to interpret news and social media trends

Future Scope

AI in stock trading is expected to grow with:

- More advanced deep learning models
- Integration with blockchain
- Explainable AI (XAI) for transparency
- Personalized investment strategies

Conclusion

AI has revolutionized stock market prediction and algorithmic trading by enabling faster, more accurate, and automated decision-making. While challenges remain, continuous advancements in AI technologies are expected to further enhance efficiency and reliability in financial markets.