

■ PRATIK.PARTHSARTHI
@timesofindia.com

You want to invest in a stock. But which one? In India alone, investors can choose from thousands of listed companies across the NSE and BSE. Choosing the right company, sector and timing can be overwhelming even for experienced investors.

For decades, investors relied on manual research—reading company reports, studying financial statements and observing market trends. Later, computers brought data analysis and faster calculations. Today, artificial intelligence (AI) is ushering in a new era.

From analysing massive datasets to executing high-speed trades in milliseconds, AI is rapidly transforming how investors study markets, manage risks and build portfolios.

THE RISE OF AI-DRIVEN INVESTING

Artificial intelligence is increasingly being used by investment firms, hedge funds, banks and retail platforms to analyse financial markets. AI systems process enormous volumes of data, including stock prices, earnings reports, global news, economic indicators and even social media sentiment.

"Algorithmic trading systems now execute millions of transactions per second, identifying micro-opportunities across global markets faster than any human analyst. Machine learning models process vast datasets—from earnings reports and macroeconomic indicators to satellite imagery and social sentiment—enabling highly accurate predictive insights," notes Dr Narayani Ramachandran, director, NMIMS Bengaluru.

Today, many brokerage platforms offer AI-based advisory tools that suggest stocks or



From gut feeling to algorithms

In the complex world of modern finance, artificial intelligence is changing how investors see and understand the market

investment strategies based on a user's risk profile, financial goals and market conditions. Robo-advisors also automatically rebalance portfolios to maintain the desired asset allocation.

HIGH-FREQUENCY TRADING AND ALGORITHMIC STRATEGIES

One of the most powerful uses of AI in stock markets is algorithmic trading and high-frequency trading (HFT).

AI-powered algorithms can execute thousands of trades within milliseconds. These systems scan multiple markets simultaneously and exploit small price differences before human traders can react.

For example, if a stock is priced slightly lower on one exchange than another, AI systems can instantly buy on the one exchange and sell on the other, capturing the difference.

Institutional investors and hedge funds use predictive

models, neural networks and reinforcement learning algorithms to forecast market trends and manage trading strategies. Another important area is sentiment analysis. AI tools analyse news headlines, earnings calls and social media posts to gauge investor sentiment. If negative sentiment rises around a company, trading systems may adjust positions even before the price moves significantly.

AI IN RISK MANAGEMENT AND PORTFOLIO BUILDING
Beyond trading, AI is also transforming portfolio management and risk analysis. Investment managers use AI models to simulate thousands of market scenarios and estimate potential risks. "Unlike rigid legacy algorithms, modern AI-driven strategies can now integrate alternative data. By analysing data with greater precision, these systems can minimise slippage even during volatile sessions," says Himanshu Pravinchandra Pandya, a SEBI-registered investment adviser.

For instance, AI can monitor how global factors such as interest rates, inflation, currency movements or oil prices may affect different sectors.

Retail investors are also benefiting. Many modern investing apps now provide AI-driven insights, personalised recommendations and automated investment plans.

According to Narinder Wadhwa, MD and CEO, Ski Capital Services, AI also plays a key role in detecting fraud. "In risk management, AI helps institutions detect fraud, monitor unusual trading patterns and conduct advanced stress testing of portfolios. AI-driven sentiment analysis of news, earnings calls and social media also provides insights into



THE AI EDGE IN INVESTING

- Faster market data analysis
- Smarter investment decisions
- High-speed algorithmic trading
- Advanced risk management
- Real-time market insights
- Automated portfolio rebalancing
- Early fraud detection systems
- Improved market trend prediction

AI has not merely assisted investing, it has redefined its very architecture. From a 'speed-booster' to a cognitive business partner, it is fundamentally transforming the investment landscape, ushering in an era of data-driven precision that was once unimaginable

market psychology, allowing investors to make more informed and timely investment decisions," Wadhwa says.

LIMITATIONS OF AI IN INVESTING

Despite its advantages, AI is not a magic solution for the stock market. Like any technology, it has its limitations. Financial markets are influenced by human behaviour, unexpected events and geopolitical shocks, which are often difficult for algorithms to predict. Even the most advanced models rely on historical data, and past patterns may not always repeat. Another concern is over-reliance on algorithms. If many investors use similar AI models, it could amplify market volatility during sudden selloffs.

There are also issues related to data quality, transparency and regulatory oversight. Some AI systems function like "black boxes", making decisions that are difficult for humans to fully understand.

Even with these challenges, AI's role in investing is expected to grow rapidly. Experts believe the future will combine human judgment with AI-powered analysis, where technology helps investors make smarter, faster and more informed decisions.

AI BY THE NUMBERS

