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A GEN AI REVOLUTION-THE FUTURE BUSINESS INTERNATIONAL CONFERENCE AI-DRIVEN TRADING AND INVESTMENT

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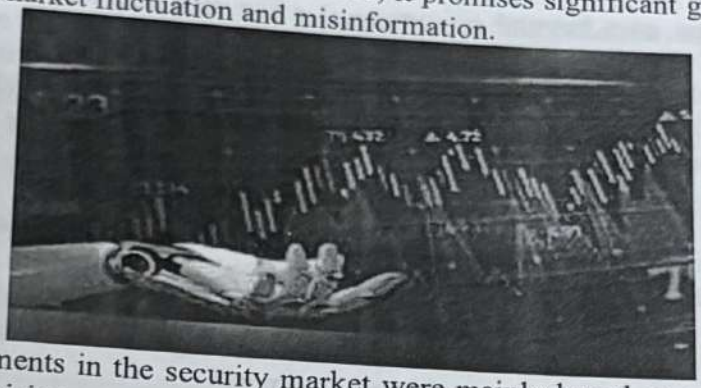
AI stock trading uses machine learning and artificial intelligence to evaluate real-time market data, historical trends, and other factors. By fast and clearly, which helps AI Systems to find out the trends and focus the movements of market.

AI is converting trading by empowering acquire to smart tools, preparing investments in stock market more effective and efficient. Machine learning and algorithmic trading helps the investors to analyze the data and forecast trends promptly. In India, AI's is integrated with primary market heightening its regulatory processes. As AI evolves, it promises significant growth in trading, while also facing issues like market fluctuation and misinformation.



Earlier, investments in the security market were mainly based on gut feelings and broader research. Stakeholders vision on a company's financial details and its stabilization in the market. The general approach was focused towards company's financial information, evaluating its Some also looked at past prices and trading volumes to predict future trends. business leaders and analyzing the competition.

With the implementation of AI, this traditional approach has changed. A few decades ago, contacting the stock broker to place the order. But now a days, stakeholders can do it immediately by using your smart phone or computer systems any where at any time. With digitalized markets, buying and selling stocks is seamless, and stakeholders can collect information about the companies through online. Combining AI and Machine Learning to the mix makes investments trading even smarter, simplifies the process for each and everyone. Algorithmic trading has significantly increased over the past 10 years. Recent studies show that around 70% of the total trading volume is initiated through Algorithmic Trading.

The data highlights the significant growth potential of the global algorithmic trading market. Valued at USD 15.55 billion in 2021, the market is expected to grow at a compound annual growth rate (CAGR) of 12.2% from 2022 to 2030. This signals increasing adoption of algorithmic trading technologies, reflecting a shift toward more automated, efficient, and data-driven trading practices in the financial industry. The expected growth indicates confidence in the future of algorithmic trading as a crucial component of financial markets, driven by technological advancements.

Key Words
Artificial Intelligence, Machine Learning, Algorithmic Trading.

AI's Role in India Stocks and Trading

The data highlights the importance about the growth of the international algorithmic trading market. Valued at USD 15.55 billion in 2021, the market was expected to grow at a compound annual growth rate (CAGR) of 12.2% beginning from 2022 to 2030. This shows the facilitating growth of algorithmic trading technologies, moves towards automatic, effective, efficient, Sophisticated and

data-driven trading practices in this fin-tech industry.The estimated growth shows growth and development in the future of algorithmic trading as a crore.

Traditionally,, securities trading was powered by a specific group of institutional investors with specifications to sophisticated tools and broader resources. However, the utilisation of AI is modifying this landscape. Today, any investor can make use of AI-driven platforms that do the analysis about the recent market trends, forecast the price movements, and helps for executing the trade.

Historically, stock trading was dominated by a select group of institutional investors with access to sophisticated tools and vast resources. However, the rise of AI is changing this landscape. Today, individuals can leverage AI-driven platforms that analyze market trends, predict price movements, and execute trades at lightning speed, leveling the playing field. AI stock trading utilizes machine learning and artificial intelligence to assess real-time market data, historical trends, and other f .. factors. By quickly and precisely processing this information, AI systems can identify trends and forecast market movements.

AI's relevancy in trading goes beyond efficiency; it offers individual investors with sophisticated insights and able to do the analysis that were once gave space for large firms. For example, AI systems can do sentimental analysis on social media and news articles, allowing investors to know about market sentiment and allows them to know the informed decisions. This level of accessing the data makes the retail investors about the better choices among the alternatives and make them to escalate their strategical investment.

Added key advantage in present fast-paced markets is the capacity to do the execution of the transactions with unexpected speed and accuracy, hats of to AI's contributions in stock research, trade discovery, and execution. AI trading firms use various tools, including predictive analysis and AI algorithms, to monitor price changes, finds out the reasons for price movements, and conducts trade while sticking on to this stable changing market environment.

As AI continues to evolve in trading, it can be categorized into four primary types:

Quantitative Trading: This method analysis price and volume data to find out the most profitable investment opportunities.

Algorithmic Trading: Traders use predefined rules based on previous data to make trading decisions.

High-frequency Trading: A subset of algorithmic trading that involves frequently doing trading transaction with more number of stocks.

Automated Trading: This system uses technical analysis from quantitative trading and computer algorithms based on historical data.

The key roles of AI in stock trading includes

- **Data Gathering:** Collecting significant financial data from various sources, including social media sentiment, news stories, corporate financials, and historical pricing data.
- **Data Preprocessing:** Cleaning and transforming the obtained data to ensure accuracy for training AI models.
- **Feature Engineering:** Collecting related characteristics with predictive value from the data.
- **Algorithm Selection:** Selecting applicable algorithms for exact stock trading, such as machine learning models and natural language processing (NLP) techniques.
- **Training the Model:** Using previous data to help the AI recognize patterns and connections in the market.
- **Backtesting:** Evaluating the performance of AI models on archival data to gain insights into potential future performance.
- **Live Trading:** Implementing AI models for real-time trading, ensuring risk management procedures are in place to guard against unexpected market movements
- **Continuous Optimization:** Adapting and learning from fresh data to stay current and effective in the ever-changing market landscape.

Related data points support AI's growing role in trading. For instance, India is growingly catching up with international markets in AI adoption, although challenges such as infrastructure and data quality remain. Investor felt that is improving as AI helps provide more exact predictions, reducing human

error. However, concerns about AI's impact on market volatility persist, especially as the technology becomes more prevalent.

Despite its benefits, reliance on AI brings certain risks. Over-dependence on AI could destabilize markets, amplifying risks such as herd behavior and flash crashes. Furthermore, AI-generated misinformation and fake content pose new challenges, necessitating proactive measures and verification tools. Indian regulators, including SEBI, are preparing for stricter rules to manage these risks, ensuring the financial ecosystem remains balanced and secure.

In conclusion, the future of AI in trading is promising, with the potential to significantly enhance efficiency and accessibility. As AI evolves from an enabler to a critical component of financial systems, balancing innovation with risk management will be essential. With proactive regulatory measures and a focus on harnessing AI's full potential, the stock market can continue democratizing, empowering investors of all backgrounds to engage in the financial landscape confidently.

The industry is poised for substantial growth, and as highlighted by industry experts, the next five years will be crucial in defining AI's long-term impact on trading efficiency and market dynamics.

Reference

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