



International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

IMPACT OF ARTIFICIAL INTELLIGENCE ON THE INVESTMENT DECISION OF INVESTORS

Sagesh Kumar Singh¹, Roushan Kumar², Sakshi Kumari³

Noida Institute of Engineering and Technology Greater Noida

ABSTRACT :

In latest years, Artificial Intelligence (AI) has emerged as a transformative force across diverse industries, which includes the financial quarter. This research investigates the effect of AI gear, inclusive of algorithmic trading structures, robo-advisors, sentiment analysis tools, and predictive analytics, at the funding choice-making process of individual and institutional traders. The have a look at explores how AI complements choice accuracy, reduces human bias, and improves marketplace forecasting. Using a combined-method technique combining quantitative information analysis and qualitative insights, the studies examines investor conduct, accept as true with in AI structures, and the effectiveness of AI-pushed tips. The findings advocate that at the same time as AI appreciably affects investor choices, elements which includes agree with, perceived reliability, and user-friendliness play a crucial function in its adoption. The examine concludes with implications for economic advisors, fintech developers, and policymakers to optimize AI integration in investment practices.

Keywords: Artificial Intelligence, Investment Decisions, Robo-Advisors, Algorithmic Trading, Predictive Analytics, Investor Behavior, Financial Technology (FinTech)

Introduction

The speedy development of era has notably reshaped the global financial landscape, with Artificial Intelligence (AI) status at the vanguard of this modification. As the monetary markets develop an increasing number of complex and statistics-pushed, traders are turning to AI-powered equipment and platforms to beautify the high-quality and speed of their investment selections. From algorithmic buying and selling and robo-advisory services to device mastering fashions that forecast marketplace tendencies, AI is revolutionizing conventional funding methods.

Artificial Intelligence permits the evaluation of massive volumes of monetary information in real time, offering insights that were previously inconceivable thru traditional strategies. This functionality empowers buyers to make greater informed and strategic decisions, doubtlessly growing returns at the same time as minimizing danger. The upward thrust of AI has also caused the democratization of funding offerings, allowing individual traders to get admission to state-of-the-art tools that have been once exceptional to institutional gamers.

Despite its benefits, the adoption of AI in funding choice-making increases crucial questions. Concerns regarding the transparency of AI models, the potential for algorithmic bias, and the level of agree with buyers place in automatic structures are relevant to information its standard impact. Moreover, the effectiveness of AI gear depends no longer simplest on technological advancement however additionally on investor training and willingness to embrace innovation.

This study targets to discover how AI influences the behavior and choice-making styles of traders, identifying both the opportunities and challenges it offers. As AI keeps to adapt, expertise its function in shaping the future of investment is essential for investors, financial establishments, and policymakers alike.

Objectives of the Study

The primary objective of this research is to analyze the impact of Artificial Intelligence (AI) on the investment decisions of investors by collecting and evaluating firsthand data. Specifically, the study aims to:

1. Understand investor awareness and perception regarding the use of AI in financial decision-making.
2. Identify the types of AI tools and platforms (such as robo-advisors, AI-based trading apps, or sentiment analysis tools) commonly used by investors.
3. Examine the influence of AI-generated recommendations on individual investment behavior and strategy.

Literature Review

Agrawal, Gans, and Goldfarb (2018) emphasized that AI's value lies in its predictive capabilities, which can significantly enhance investment decisions when properly leveraged. Their work outlines the economic implications of AI, suggesting that more accurate predictions can lead to more informed and timely investment actions.

Dhar (2016) explored the growing role of automation and AI in financial advice, suggesting that robo-advisors and algorithmic trading platforms are not only improving efficiency but also reshaping the traditional advisory landscape. This is supported by the findings of Kose and Shetty (2020), who examined how AI tools can assist investors in managing risk and optimizing their portfolios by processing vast datasets more effectively than human advisors.

Choudhury (2021) provided an in-depth understanding of how AI applications such as portfolio optimization, fraud detection, and risk management are being implemented in the financial sector. His study highlighted the potential of AI to bring precision and consistency to investment strategies that were once subject to emotional or intuitive human biases.

Industry reports by PwC (2017) and McKinsey & Company (2023) have further reinforced the economic value of AI, noting that companies using AI strategically are outperforming their competitors. These reports forecast increased reliance on AI across asset management and retail investing sectors, driven by the need for faster, data-backed investment decisions.

On a professional front, the CFA Institute (2020) discussed both opportunities and challenges AI presents to financial professionals. While AI offers tools that enhance decision-making, it also demands a new skill set from investment advisors to interpret AI outputs and communicate them effectively to clients.

Online investment education platforms like Zerodha Varsity (2024) and financial portals such as Investopedia (2022) and Financial Express (2023) have also published insights on how retail investors in India and globally are adopting AI tools such as robo-advisors, sentiment analysis platforms, and auto-trading applications. These resources underline that the adoption is more pronounced among younger and tech-savvy investors.

The literature reveals a consensus that AI is revolutionizing investment strategies by improving access to real-time information, reducing costs, and minimizing human errors. However, it also identifies challenges including trust issues, regulatory uncertainties, and the need for investor education to maximize AI's potential in financial markets.

Research Methodology

This section outlines the research design, data collection method, sampling technique, and tools used for data analysis in the study of how Artificial Intelligence (AI) influences investment decisions.

1. Research Design

The research follows a *descriptive research design*, which is appropriate for studying the awareness, usage, and influence of AI on investors' decisions. It aims to collect and describe relevant primary data to assess patterns and perceptions among individual investors.

2. Research Approach

The study adopts a *quantitative research approach*, using structured questionnaires to gather measurable data from a targeted sample group. This approach helps in obtaining objective, statistical insights into the role of AI in investment decision-making.

3. Source of Data

- *Primary Data:* Collected directly from individual investors through a self-administered questionnaire.
- *Secondary Data:* Reviewed from published literature, journal articles, books, websites, and reports (as detailed in the Literature Review).

4. Data Collection Tool

A *structured questionnaire* was designed based on the study's objectives. The questionnaire includes close-ended questions divided into four sections:

- Demographics
- Awareness and understanding of AI
- Usage of AI-based investment tools
- Influence of AI on investment decisions

5. Sample Size

The research is based on responses from a *sample size of 100 investors*. This number was deemed sufficient to draw statistically relevant conclusions

within the scope of this study.

6. Sampling Technique

A *non-probability convenience sampling* method was used. Participants were selected based on accessibility and willingness to respond, which is appropriate for exploratory primary research with time and resource constraints.

7. Target Population

The target population includes *individual investors* from various professions, age groups, and experience levels who are engaged in investing in financial markets.

8. Data Analysis Techniques

The collected data was analyzed using:

- *Frequency distribution tables*
- *Percentage analysis*: These tools enabled interpretation of patterns and behaviors in relation to AI adoption and its influence on investment decisions.

Data Analysis & Interpretation

Section A: Basic Demographic Information

Q1. What is your age group?

Particular	No. of Respondents	Percentage
Under 25	20	20%
25–34	35	35%
35–44	25	25%
45–54	15	15%
55 and above	5	5%

Interpretation:

The majority of respondents (35%) fall within the 25–34 age group, indicating that younger investors are more active or interested in the topic of AI in investment. Only 5% are aged 55 and above, showing limited participation from older investors.

Q2. What is your profession?

Particular	No. of Respondents	Percentage
Student	18	18%
Salaried Employee	50	50%
Business Owner	22	22%
Retired	10	10%

Interpretation:

Half of the respondents are salaried employees, followed by business owners (22%) and students (18%). This suggests that working professionals are most likely to engage with AI tools in their investment decisions.

Q3. How many years of investment experience do you have?

Particular	No. of Respondents	Percentage
Less than 1 year	25	25%
1–3 years	40	40%
3–5 years	20	20%
More than 5 years	15	15%

Interpretation:

Most respondents (40%) have 1–3 years of investment experience, showing that relatively new investors are more actively exploring AI-based tools.

Section B: Awareness and Understanding of AI in Investment**Q4. Are you aware that Artificial Intelligence (AI) is being used in the financial and investment sectors?**

Particular	No. of Respondents	Percentage
Yes	82	82%
No	18	18%

Interpretation:

A high percentage (82%) of respondents are aware of AI usage in the financial sector, indicating strong general awareness among investors.

Q5. How would you rate your understanding of how AI works in investment tools or platforms?

Particular	No. of Respondents	Percentage
Very Good	10	10%
Good	25	25%
Average	40	40%
Poor	15	15%
No Understanding	10	10%

Interpretation:

While most respondents (40%) rated their understanding as average, a significant portion (25%) reported a good understanding. Only 10% claim very good knowledge, suggesting that while awareness is high, deep understanding is still limited.

Section C: Usage of AI-Based Tools**Q6. Have you ever used any AI-based investment tools?**

Particular	No. of Respondents	Percentage
Yes	60	60%
No	40	40%

Interpretation:

60% of respondents have used AI-based investment tools, indicating a growing adoption rate, although 40% have yet to engage with such technologies.

Q7. If yes, which of the following AI tools have you used? (Only among 60 who said “Yes”)

Particular	No. of Respondents	Percentage (of 60)
Robo-Advisors	35	58.3%
AI-based Stock/ETF screeners	30	50.0%
Algorithmic or Auto Trading Platforms	20	33.3%
Sentiment Analysis Tools	15	25.0%
Other	5	8.3%

Interpretation:

Robo-advisors are the most commonly used AI tools (58.3%), followed by stock screeners. This shows that investors primarily engage with AI for simplified portfolio recommendations and screening.

Section D: Influence of AI on Investment Decisions**Q8. To what extent do AI-generated insights or recommendations influence your investment decisions?**

Particular	No. of Respondents	Percentage
Highly Influential	20	20%
Somewhat Influential	40	40%
Slightly Influential	25	25%
Not Influential	15	15%

Interpretation:

A combined 60% of respondents find AI-generated insights either highly or somewhat influential, highlighting the significant role AI plays in shaping investment behavior.

Q9. Has using AI tools changed the way you choose assets (stocks, mutual funds, etc.)?

Particular	No. of Respondents	Percentage
Yes, significantly	18	18%
Yes, to some extent	42	42%
No noticeable change	20	20%
Not applicable	20	20%

Interpretation:

60% of respondents reported a change in their asset selection approach due to AI tools, indicating that AI has had a meaningful impact on decision-making patterns.

Q10. How much do you trust AI-based recommendations compared to human advisors?

Particular	No. of Respondents	Percentage
Trust AI more	25	25%
Trust both equally	30	30%
Trust human advisors	30	30%
Not sure	15	15%

Interpretation:

Respondents are split in their trust levels—30% each trust either AI or human advisors more, while 25% lean toward AI. This reflects a transitional trust landscape in investment decision-making.

Findings

Based on the analysis of the primary data collected from 100 respondents, the following key findings have been observed:

1. **Age and Demographic Composition**
 - The majority of respondents (35%) fall within the 25–34 age group, indicating that younger investors are more actively exploring AI-based investment tools.
 - A large proportion (50%) are salaried employees, followed by business owners (22%), suggesting that working professionals are the primary users of AI in investment.
2. **Investment Experience**
 - 40% of respondents have 1–3 years of investment experience, showing that relatively new investors are more inclined to use AI tools.
3. **Awareness of AI in Financial Markets**
 - A significant 82% of respondents are aware that AI is being used in the investment and financial sectors.
 - However, only 10% of respondents rated their understanding of AI as "Very Good," while 40% rated it as "Average," revealing a gap between awareness and technical understanding.
4. **Usage of AI Tools**
 - 60% of respondents have used AI-based investment tools, showing a growing trend in AI adoption among retail investors.
 - Among these users, the most popular tools are Robo-Advisors (58.3%) and AI-based stock/ETF screeners (50%), highlighting that investors prefer tools that offer convenience and decision support.
5. **Influence of AI on Investment Decisions**
 - 60% of respondents reported that AI insights are either highly or somewhat influential in their investment decision-making process.
 - 42% stated that AI tools have changed the way they choose assets to some extent, while 18% reported a significant change.
6. **Trust in AI vs. Human Advisors**
 - Trust is nearly evenly split: 30% trust AI and human advisors equally, 30% prefer human advisors, and 25% trust AI more.
 - This suggests that while AI adoption is increasing, human expertise is still considered important by a substantial portion of investors.

Conclusion

The examine aimed to explore the effect of Artificial Intelligence (AI) on the funding decisions of investors via number one information series. Based on the responses from 100 members, it's far evident that AI is playing an an increasing number of crucial position in shaping modern-day funding conduct. The consequences reveal a high degree of focus amongst traders about the mixing of AI in economic markets. However, a gap still exists among awareness and deep knowledge of the way AI technology feature. While many traders are open to the usage of AI-based equipment, handiest a small component declare to have a robust hold close of the underlying technology.

The utilization of AI in investment is fantastically vast, with equipment which includes robo-advisors and stock screeners being the most generally used. These equipment are valued for his or her efficiency, automation, and statistics-pushed insights, making them attractive, specially to more youthful and reasonably skilled buyers.

AI-generated insights drastically affect funding decisions for a majority of respondents, main to terrific changes in how assets are decided on and portfolios are controlled. However, on the subject of trust, investors continue to be divided—while a few decide on AI, others nevertheless depend closely on human advisors or pick a mixture of both.

In end, AI has began to convert the funding landscape by way of imparting more advantageous choice-making equipment, however its full potential will best be realized when investors are higher knowledgeable about its capabilities and limitations. As AI keeps to evolve, so too will its role in financial selection-making, making it critical for both investors and provider companies to adapt as a consequence.

BIBLIOGRAPHY

1. Agrawal, A., Gans, J., & Goldfarb, A. (2018). *Prediction Machines: The Simple Economics of Artificial Intelligence*. Harvard Business Review Press.
2. Dhar, V. (2016). "The Future of Financial Advice: How AI and Automation are Changing Investing". *Communications of the ACM*, 59(11), 64–70.
3. Kose, J., & Shetty, M. (2020). "AI in Finance: The Transformation of Investment Decisions". *Journal of Financial Technology*, 8(2), 45–58.
4. Choudhury, M. (2021). *Artificial Intelligence in Financial Markets: Cutting Edge Applications for Risk Management, Portfolio Optimization, and Economics*. Springer.
5. PwC. (2017). *Sizing the Prize: What's the Real Value of AI for Your Business and How Can You Capitalise?* Retrieved from <https://www.pwc.com>
6. CFA Institute. (2020). *AI and the Investment Professional: Opportunities and Challenges*. Retrieved from <https://www.cfainstitute.org>
7. Investopedia. (2022). "How Artificial Intelligence Is Changing the Face of Investing". Retrieved from <https://www.investopedia.com>
8. McKinsey & Company. (2023). *The State of AI in Financial Services*. Retrieved from <https://www.mckinsey.com>
9. Zerodha Varsity. (2024). *AI Tools in Retail Investing*. Retrieved from <https://zerodha.com/varsity/>
10. Financial Express. (2023). "AI in Indian Stock Markets: A Game Changer for Retail Investors". Retrieved from <https://www.financialexpress.com>