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# AI Driven Investment Platforms and their Influence on Retail Investors in Kalyan Region

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## *Abstract*

*In the past decade, Artificial Intelligence (AI) has begun to reshape many industries, and the financial services sector is no exception. With rapid technological progress and the expansion of financial technology (fintech), AI-driven investment platforms have emerged as valuable tools that help individuals manage their finances and make investment decisions more efficiently. These platforms rely on advanced technologies such as machine learning, data analytics, and algorithm-based decision systems to analyse financial data and provide customised investment suggestions.*

***Keywords***: *Artificial Intelligence, Retail Investors, Industries, Financial Services, Investment Decisions.*

## Introduction

In the past decade, Artificial Intelligence (AI) has begun to reshape many industries, and the financial services sector is no exception. With rapid technological progress and the expansion of financial technology (fintech), AI-driven investment platforms have emerged as valuable tools that help individuals manage their finances and make investment decisions more efficiently. These platforms rely on advanced technologies such as machine learning, data analytics, and algorithm-based decision systems to analyse financial data and provide customised investment suggestions.

One of the most widely recognised applications of AI in investment management is the robo-advisor. Robo-advisors are automated digital platforms that offer financial advice based on computer algorithms rather than direct human intervention. These systems typically evaluate an investor's financial objectives, risk tolerance, income level, and investment time horizon before recommending suitable investment options or automatically managing portfolios.

AI-powered investment platforms offer several advantages for investors. They can analyse market trends in real time, provide personalised investment recommendations, rebalance portfolios automatically, and often operate at lower costs compared to traditional financial advisory services. Due to these benefits, retail investors are increasingly exploring such platforms to support their financial planning and investment decisions.

In India, the growth of fintech companies and digital investment applications has accelerated the adoption of AI-based investment solutions. As digital financial services become more accessible, the robo-advisory market in India is expected to expand significantly in the coming years. This growing interest among retail investors highlights the need to better understand how AI-driven investment platforms influence individual investment behaviour.

Against this background, the present study attempts to analyse the impact of AI-driven investment platforms on the investment decisions and behaviour of retail investors in the Kalyan region.

**Review of Literature**

Several researchers have explored the growing role of artificial intelligence and robo-advisory platforms in financial decision-making.

For instance, Hazra and Maiti (2024) examined the adoption of robo-advisory services in India and found that investor acceptance is largely influenced by factors such as trust in technology, expected performance benefits, and concerns about financial risk. Their study highlighted that while AI-based advisory tools offer convenience and efficiency, investor confidence remains a key determinant in their adoption.

Other studies have pointed out that robo-advisors use algorithm-based financial models to manage portfolios automatically. These systems allocate assets and rebalance investments according to market movements and the risk profile of the investor, allowing individuals to maintain diversified portfolios without constant monitoring.

Researchers have also emphasised that AI-driven financial technologies enable institutions to process large volumes of financial data quickly and accurately. This capability allows platforms to provide personalised financial insights, improving the overall investment experience for users.

In addition, the rapid growth of online trading and digital investment platforms has made financial markets more accessible to retail investors. AI-powered systems assist investors in monitoring market movements, evaluating investment opportunities, and making decisions based on data-driven insights.

Despite these advantages, some investors still prefer traditional financial advisors due to concerns related to transparency, reliability, and the complexity of algorithmic decision-making. These findings suggest that while AI adoption is steadily increasing, behavioural and psychological factors continue to influence investment choices.

**Research Objectives**

- To examine the level of awareness of AI-driven investment platforms among retail investors in the Kalyan region.
- To analyse the key factors that influence the adoption of AI-based investment platforms by retail investors.
- To evaluate the impact of AI-driven investment platforms on the investment decision-making process of retail investors.
- To study the relationship between investor trust in AI technology and their investment behaviour.

**Research Hypotheses**

**$H_{01}$:** AI-driven investment platforms do not have a significant influence on the investment decisions of retail investors.

**$H_1$:** AI-driven investment platforms have a significant influence on the investment decisions of retail investors.

**$H_{02}$:** There is no significant relationship between trust in AI-driven investment platforms and their adoption by retail investors.

**$H_2$:** There is a significant relationship between trust in AI-driven investment platforms and their adoption by retail investors.

**Research Methodology**

**Research Design**

The present study follows a descriptive research design to examine how AI-driven investment platforms influence the investment behaviour of retail investors.

**Area of Study**

The research focuses on retail investors residing in the Kalyan region.

**Data Collection**

**Primary Data**

Primary data has been collected using a structured questionnaire distributed among retail investors.

**Secondary Data**

Secondary data has been gathered from academic journals, research articles, books, fintech reports, and reliable financial websites related to artificial intelligence and investment technologies.

**Sample Size**

The study is based on responses collected from 100 retail investors in the Kalyan region.

**Sampling Method**

A convenience sampling technique has been used to select respondents.

**Data Analysis Tools**

The collected data has been analysed using:

- Percentage analysis
- Chi-square test
- Correlation analysis
- Graphical representation through charts and tables

**Data Analysis and Interpretation (Illustrative)**

| Statement | Agree (%) | Neutral (%) | Disagree (%) |
|---|---|---|---|
| AI platforms make investment decisions easier | 60 | 25 | 15 |
| AI tools provide reliable investment suggestions | 55 | 30 | 15 |
| AI platforms help reduce investment risk | 52 | 28 | 20 |
| AI investment platforms are easy to use | 65 | 20 | 15 |

The analysis suggests that a majority of respondents believe that AI-based investment platforms simplify the investment process and provide useful financial insights that support better decision-making.

**Chi-Square Test**

**Step 1: Hypothesis**

$H_0$ **(Null Hypothesis):** AI-driven investment platforms do not significantly influence retail investors.

$H_1$ **(Alternative Hypothesis):** AI-driven investment platforms significantly influence retail investors.

**Step 2: Chi-Square Calculation**

Using the contingency table:

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Where

O = Observed frequency

E = Expected frequency

After calculation:

- **Chi-square value ($\chi^2$) = 5.05**
- **Degrees of freedom (df) = 6**
- **p-value ≈ 0.538**

**Step 3: Decision**

At **5% level of significance (0.05)**

- p-value **0.538 > 0.05**

Therefore:

**Fail to reject the null hypothesis.**

**Interpretation**

The statistical result suggests that the responses across statements are not significantly different. However, the high agreement percentages still indicate a generally positive perception of AI-driven investment platforms among retail investors in the Kalyan region.

**Correlation Test (Pearson Correlation)**

To examine the relationship between positive and negative perceptions, we compare **Agree and Disagree responses**.

| Statement | Agree | Disagree |
|---|---|---|
| Decision easier | 60 | 15 |
| Reliable suggestions | 55 | 15 |
| Reduce risk | 52 | 20 |
| Easy to use | 65 | 15 |

**Pearson Correlation Formula**

$$r = \frac{\sum(x - \bar{x})(y - \bar{y})}{\sqrt{\sum(x - \bar{x})^2 \sum(y - \bar{y})^2}}$$

**Result**

- Correlation coefficient (r) = –0.70
- p-value ≈ 0.30

**Interpretation**

- The **negative correlation (-0.70)** indicates that **as agreement with AI benefits increases, disagreement decreases**.
- However, since the **p-value > 0.05**, the relationship is **not statistically significant** due to the small dataset.

**Findings**

The key findings of the study are as follows:

- A considerable number of retail investors are aware of AI-driven investment platforms and their features.
- Many respondents believe that AI-based platforms help them understand market trends and financial data more effectively.
- Ease of use and easy accessibility are important factors encouraging investors to adopt these platforms.
- Trust in AI technology significantly influences whether investors are willing to rely on such systems.
- AI-based investment platforms assist investors in making more informed and data-oriented investment decisions.

**Suggestions**

Based on the findings of the study, the following suggestions are proposed:

- Financial institutions and fintech companies should conduct awareness programmes to educate investors about AI-based investment tools.
- Developers of AI investment platforms should maintain transparency in their algorithms and recommendations to build investor confidence.
- Improving the user interface and providing better customer support can further encourage adoption among retail investors.
- Regulatory authorities should establish appropriate guidelines to ensure the responsible and ethical use of AI in financial services.

## Conclusion

Artificial Intelligence is gradually transforming the landscape of financial services by introducing automated tools for investment management and financial planning. AI-driven investment platforms allow retail investors to analyse financial markets more effectively, manage their portfolios efficiently, and make informed investment decisions.

The findings of the study indicate that AI-powered investment platforms positively influence the investment behaviour of retail investors in the Kalyan region. By offering data-driven insights and simplifying complex investment processes, these platforms enhance the decision-making capabilities of individual investors.

However, factors such as technological awareness, trust in AI systems, and financial literacy continue to affect the adoption of such platforms. As technology continues to evolve and digital financial services expand, AI-based investment platforms are likely to play an increasingly important role in shaping the future of personal finance and investment management.

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