International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Exploring the Role of Artificial Intelligence in Investment Decisions: A Study of Student Awareness and Perception

Dr. B Rammya[1], Dr R Parvathi[2], Gowri Hebbar[3]

[1]Associate Professor, VET First Grade College, Bengaluru
[2]Principal and Academic Director, VET First Grade College, Bengaluru
[3]Assistant Professor, VET First Grade College, Bengaluru

Abstract

The advent of Artificial Intelligence (AI) is transforming the landscape of behavioral finance, particularly in investment decisions. As AI continues to permeate various domains of commerce, business, and management, its role in investment is becoming increasingly significant. This study aims to investigate the dual-edged impact of AI on investment decisions, highlighting both the benefits and drawbacks of its integration. The research focuses on understanding the awareness and perception of students regarding AI's role in investment, as well as their attitudes towards its adoption. The objectives of the study are to identify the pros and cons of AI in investment decisions from students perspective, to evaluate the awareness level of students regarding AI in investing and to analyze the perception of students towards AI in investment. Through a primary data collection process using Google Forms, this study gathered insights from students on their perceptions of AI in investment and their investment habits. The collected data was be analyzed using descriptive statistics and statistical tests to identify patterns and correlations. The findings suggest that students are aware of AI's benefits in investment, particularly in data analysis. However, concerns about data privacy are prominent. The study also highlights similarities in AI familiarity across genders and disciplines. While AI awareness positively influences trust and investment decisions, the impact is low.

Keywords: Artificial Intelligence (AI), Investment, Student Awareness, Perception,Investment Decisions.

Introduction

Artificial Intelligence is a new phenomenon that is sweeping the world in the recent times. It has been applied and used in various domains and finance and financial services is also no exception. Investment involves employing excess funds in an available opportunity so as to earn a return on the money invested. Students are the future leaders of nation and their awareness and perception about the usage of AI in investment and its decisions matters a lot in this contemporary world. This research article is aimed at analysing the perception of students on exploring the role of Artificial Intelligence on the awareness, understanding and perception of the students. This is a new field and requires a lot of exploration to be done to understand the role of AI as AI promises to be both beneficial and detrimental at the same time. The introduction of AI has simplified and automated many tasks in various domains and with financial

services.

Review of Literature

The review of exiting literature is classified as reviews with respect to Awareness and Perception of AI in Investment, AI in Investment Decision-Making and Student Awareness and Perception. The detailed review is as under

Awareness and Perception of AI in Investment

Bahoo et al. (2024) conducted a comprehensive review of AI in finance, highlighting its transformative potential in areas like investment management and financial decision-making. A study by Jiang et al. (2023) found that students perceive AI tools as highly valuable in finance education, enhancing their learning experience and engagement. - Grájeda et al. (2024a) developed a synthetic index to assess student-perceived impact of AI tools in finance education, emphasizing the importance of usability, effectiveness, and benefits. Rammya et al (2024) conducted a study titled Artificial Intelligence and Machine Learning in Finance – Adoption, Benefits and Future : A Conceptual study found that AI helps in devising strategies for investors and suggests as to what to do, when to do, how to do and how much to do with respect to investment based on the investors goals, preferences and objectives.

AI in Investment Decision-Making

Irfan et al. (2024) explored the impact of AI innovation on financial sectors, highlighting its potential to enhance decision-making, efficiency, and alpha generation. - Karthika et al. (2023) examined the role of AI in asset management, noting its ability to handle big data and derive useful insights. Bianchi and Briere (2021) discussed the benefits of AI in investment decisions, including improved accuracy and enhanced risk management. Sah A et al (2025) undertook a study titled Understanding the Influence of Artificial Intelligence on Investment Decision Making Among Young Adults in the Stock Market and found that investment decisions are affected and influenced by the emerging technology like AI. It was found that Artificial Intelligence offers tools for analysing the market which helps investors in informed decision making.

Student Awareness and Perception

A study by Shanmuganathan (2020) investigated the impact of AI on investment decisions amongst teachers, highlighting the potential benefits and challenges of using AI in investment decision- making. Oke and Cavus (2024) conducted a bibliometric analysis of AI in financial services, emphasizing its transformative potential in areas like investment management. Goswami et al (2024) conducted a study titled Unveiling the investment behaviour of Gen Y and Z: A study on Artificial Intelligence Stock awareness and decision making found that male population of Gen Y and Z are more likely to invest in AI stock as compared to their female counterparts. It was also suggested that workshops and training programs should be arranged by financial institutions to create awareness about the usage of AI in investing. Tyagi et al (2023) conducted a study titled Exploring the Cognitive Framework: How Students Perceive AI in Financial Decision-Making and found that 88% of students believe that AI is important in financial decisions and also stressed the need for enhancing finance education augmented with AI to bridge the gap between technology and financial environment.

Research Gap

While numerous studies have explored students' perceptions of Artificial Intelligence (AI) in education and business management, a significant gap exists in understanding their views on AI in investment decisions. This study aims to bridge this gap by investigating how students perceive AI in the context of investing. By examining students' perceptions, this research will provide valuable insights into their understanding of AI's role in investment decisions, their attitudes towards AI-driven investment tools and platforms, their concerns and reservations about AI in investing and their expectations from AI-powered investment solutions. his study's findings will contribute to a better understanding of the potential benefits and challenges of AI in investment, ultimately informing the development of more effective AI-driven investment tools and strategies that meet the needs of young investors.

Objectives

The objectives of the study are

- To identify the pros and cons of AI in investment decisions from students perspective
- To evaluate the awareness level of students regarding AI in investing
- To analyze the perception of students towards AI in investment.

Research methodology

The research is a descriptive research describing the Awareness, usage of AI in investment and the perception of students with respect to AI in investment. The researchers formulated a questionnaire and circulated to the students in South Bengaluru through google forms. The questionnaire consisted of demographic questions and also questions based on Likert scale. The data was analyzed using descriptive statistics, such as means, frequencies, and percentages, to provide an overview of the respondents' characteristics and responses. The random sampling technique was used to collect the data. The collected data was first checked for validity and reliability using Cronbach Alpha and further analysis was conducted using statistical tests, facilitated by SPSS software, to identify patterns, relationships, and significant differences in the data.

By employing a systematic and structured approach, this study aims to provide a comprehensive understanding of students' awareness, usage, and perception of AI in investment, ultimately contributing to the development of more effective AI-driven investment solutions.

Sampling technique – simple random sampling No. of samples – 188

Scope – students belonging to under graduation, post-graduation and research scholars various disciplines including science, commerce, management, engineering, arts and others.

Data collection tool – Questionnaire through google forms

Analysis – Percentage analysis, reliability testing using Cronbach alpha, descriptive statistics and statistical tests like Chi-square test, correlation using SPSS package.

Analysis and Interpretation

The researchers have analysed the data collected using google forms form students of both under graduation and post-graduation from various disciplines like commerce, management, science, engineering, arts and others. From the study, it was found that the following are the perceived benefits of using AI in investments. 56.9% perceived data analysis as the major benefit of using AI in investment,

53.7% perceived 24/7 assistance availability as a major benefit, 52.1% perceived speed as a benefit, human error reduction was perceived as major benefit by 45.2% and 34% perceived the rational decision making and lessened emotions as the major benefit of using AI in investment.

On the other side of the coin, 62.2% perceived data privacy as a cause of concern, 52.1% perceived lack of human oversight as a major challenge, 47.3% perceived reliability as a major issue, 36.2% believed over-reliance on machines is not good and 34.6% perceived ethical considerations as a major concern in usage of AI for investment purpose. All said and done, AI is only a tool and not the only tool. The human intelligence combined with artificial intelligence can actually work out wonders in investment domain and this linkage could be explored in future research as well.

The other data collected was analysed using SPSS package

Table 1 showing descriptive statistics

	age	gender	Academic discipline	Level of study

N	Valid	188	188	188	188
	Missing	0	0	0	0
Mean		1.3564	1.4362	2.4415	1.2553
Median		1.0000	1.0000	2.0000	1.0000
Mode		1.00	1.00	2.00	1.00
Std. Deviation		.54293	.49723	1.30887	.44927
Variance		.295	.247	1.713	.202
Skewness		1.201	.260	1.351	1.309
Std. Error of Skewness		.177	.177	.177	.177
Kurtosis		.464	-1.954	1.116	.206
Std. Error of Kurtosis		.353	.353	.353	.353

The above table shows the descriptive statistics of the demographic factors collected from 188 respondents. The statistics shows that 68% of the respondents belong to the age group 18-20, 29% belong to 21-23 years age group and remaining 3% above 24 years of age group. 56% of the respondents are female and remaining 44% are male. 52% are commerce respondents, 18% are science respondents, 15% are from management discipline, 10% from Engineering discipline and remaining 5% belong to other discipline. 75% of the respondents are Undergraduate students and remaining 24.5% are post graduate students and a meagre 0.5% are research scholars.

Reliability Analysis

The researchers' conducted reliability test for the liker scale based questions in the study and found the following statistics

Table 2 showing Reliability Statistics for Likert scale questions

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.803	.805	10

The Cronbach's Alpha is 0.803, which is more than the prescribed 0.700. This shows the reliability and validity of the data collected using questionnaire. It shows the internal consistency of the questions chosen for the study.

Chi Square test for Gender and Familiarity with AI

H0: The proportions of Familiarity of AI are same among different gender groups

H1: The proportions of Familiarity of AI are not the same among different gender groups.

Table 3 Table showing Chi-Square Test

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.135[a]	4	.189
Likelihood Ratio	6.154	4	.188
Linear-by-Linear Association	2.460	1	.117

N of Valid Cases	188		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.98.

The p value from the table is 0.189. Since p value is more than 0.05, accept null hypothesis. There is insufficient evidence to suggest that the proportions of familiarity with AI differ significantly among different genders. In other words, the data suggests that familiarity with AI is similar across different genders.

Chi Square test for Academic Discipline and Familiarity with AI

H0: The proportions of Familiarity of AI are same among different academic disciplines

H1: The proportions of Familiarity of AI are not the same among different academic disciplines.

Table 4 Table showing Chi-Square Test

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	31.187[a]	20	.053
Likelihood Ratio	33.562	20	.029
Linear-by-Linear Association	.047	1	.829
N of Valid Cases	188		

a. 18 cells (60.0%) have expected count less than 5. The minimum expected count is .09.

The p value from the table is 0.053. Since p value is slightly above than significance level of 0.05, we fail to reject hypothesis. There is insufficient evidence to suggest that the proportions of familiarity with AI differ significantly among different academic disciplines. In other words, the data suggests that familiarity with AI is similar across different academic disciplines.

Correlation between Respondents' familiarity with AI and Trust in AI

H0: There is no significant relationship between Familiarity with AI and Trust in AI H1: There is a relationship between Familiarity with AI and Trust in AI

Table 5 – table showing Correlation

		AI awareness	Perception on trust in AI
AI awareness	Pearson Correlation	1	.218**
	Sig. (2-tailed)		.003
	N	188	188
Perception on trust in AI	Pearson Correlation	.218**	1
	Sig. (2-tailed)	.003	
	N	188	188

**. Correlation is significant at the 0.01 level (2-tailed).

The p value is 0.003 which is less than 0.05. We reject null hypothesis and conclude that there is relationship between Familiarity with AI and Trust in AI. The Pearson's correlation coefficient is 0.218 which shows a positive yet low correlation between familiarity with AI and trust in AI.

Correlation between knowledge about investment concepts and usage of AI tools for investment in future

H0: There is no relationship between knowledge about investment concepts and usage of AI tools for investment in future

H1: There is a relationship between knowledge about investment concepts and usage of AI tools for investment in future

Table 6- Table showing Correlation

		Investment concepts	Use AI tool for future
investment concepts	Pearson Correlation	1	.242**
	Sig. (2-tailed)		.001
	N	188	188
use Ai tool for future	Pearson Correlation	.242**	1
	Sig. (2-tailed)	.001	
	N	188	188

**. Correlation is significant at the 0.01 level (2-tailed).

The p value is 0.001 which is less than 0.05. We reject null hypothesis and conclude that there is relationship between knowledge about investment concepts and usage of AI tools for investment in future. The Pearson's correlation coefficient is 0.242 which shows a positive yet low correlation between knowledge of investment concepts and usage of AI tools for investment in future

AI Apps encountered and perception about AI analysing market trends more effectively than human analyst – chi square test

H0: The proportions of AI apps encountered does not affect the perception about AI analysing market trends more effectively than human analyst

H1: The proportions of AI apps encountered does affect the perception about AI analysing market trends more effectively than human analyst.

Table 7 – Table showing Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.492[a]	8	.012
Likelihood Ratio	20.169	8	.010

Linear-by-Linear Association	1.551	1	.213
N of Valid Cases	188		

a. 4 cells (26.7%) have expected count less than 5. The minimum expected count is 1.04.

The p value from the table is 0.012. Since p value is less than 0.05, reject null hypothesis and conclude that the proportions of AI apps encountered does affect the perception about AI analysing market trends more effectively than human analyst.

Findings

The findings of the study are as follows

- 68% of the respondents belong to age group of 18-20 years implying that the students have just started their under graduation.
- 56% of the respondents are female implying almost equal responses from both male and female. As per discipline, 52% of the respondents are from Commerce field.
- 56.9% of the respondents perceived data analysis as the major benefit of using AI in investment
- 62.2% of the respondents perceived data privacy as a cause of concern of using AI in investment management.
- The study reveals that familiarity with AI is same across male and female.
- There is also similarity in familiarity with AI among different disciplines.
- There is a low positive correlation between respondents familiarity with AI and the trust they have on the AI
- Also there is a low positive correlation between respondents' knowledge of investment concepts and usage of AI tools by them for investment in future
- It was also found that the proportions of AI apps encountered by the respondent's does affect the perception about AI analysing market trends more effectively than human analyst.

Conclusion

The study Exploring the Role of Artificial Intelligence in Investment Decisions: A Study of Student Awareness and Perception reveals key insights into students' understanding and attitudes towards AI in investment. The findings suggest that students are aware of AI's benefits in investment, particularly in data analysis. However, concerns about data privacy are prominent. The study also highlights similarities in AI familiarity across genders and disciplines. While AI awareness positively influences trust and investment decisions, the impact is low. Notably, exposure to AI apps influences perceptions of AI's effectiveness in market trend analysis. These findings provide valuable insights for educators, investors, and AI developers to enhance AI-driven investment solutions. AI has been playing transformational role in various domains and so is with investment management. AI would be definitely turnover Investment management in the future but should be cautiously used considering its major concern. Students should be educated and trained regarding the usage of AI in investment. Future research could be conducted to analyse the impact of AI on the investment behaviour of the students.

References

1. Bahoo, S., Cucculelli, M., Goga, X., & Mondolo, J. (2024). Artificial intelligence in finance: A comprehensive review through bibliometric and content analysis. SN Business & Economics, 4(2),

1–46.
2. Bianchi, M., & Briere, M. (2021). Augmenting Investment Decisions with Robo-Advice. TSE Working Papers 21-1251. Toulouse: Toulouse School of Economics (TSE).
3. Goswami V, Joshi V K, and Sharma G. (2024). Unveiling the investment behaviour of Gen Y and Z: A study on Artificial Intelligence Stock awareness and decision making. Multidisciplinary Approaches for sustainable development. 1st edition. CRC Press.
4. Grájeda, A., Burgos, J., Córdova, P., & Sanjinés, A. (2024a). Assessing student-perceived impact of using artificial intelligence tools: Construction of a synthetic index of application in higher education. Cogent Education, 11(1), 2287917.
5. Irfan, M., Elmogy, M., Shabri Abd. Majid, M., & El-Sappagh, S. (2024). The Impact of AI Innovation on Financial Sectors in the Era of Industry 5.0. IGI Global.
6. Jiang, Q., Zak, L., Leshem, S., Rampa, P., Howle, S., Green, H. N., & Iqbal, T. (2023). Embodied AI for financial literacy social robots. 2023 Systems and Information Engineering Design Symposium (SIEDS), 220–225.
7. Karthika, R., Anburaj, A., & Raja, S. (2023). Artificial Intelligence in Investment Management.
8. Oke, O. A., & Cavus, N. (2024). The role of AI in financial services: A bibliometric analysis. Journal of Computer Information Systems, 1–13.
9. Rammya , B and Parvathi, R. (2024). Artificial Intelligence and Machine Learning in Finance – Adoption, Benefits and Future : A Conceptual study. ISBN 978-93-340-9762-7 Mamatha Publishers. Pg 24-27.
10. Sah, A., & Gaikwad, S. (2025). Understanding the Influence of Artificial Intelligence on Investment Decision Making Among Young Adults in the Stock Market. *Anvesha*, *17*(1).
11. Shanmuganathan, M. (2020). Behavioral finance in an era of artificial intelligence: Longitudinal case study of robo-advisors in investment decisions. Journal of Behavioral and Experimental Finance, 27, 100297.
12. Tyagi, S., Kargeti, H., Rastogi, N., & Tiwari, R. (2023, December). Exploring the Cognitive Framework: How Students Perceive AI in Financial Decision-Making. In *2023 International Conference on Advanced Computing & Communication Technologies (ICACCTech)* (pp. 597-602). IEEE.