

Artificial Intelligence in Personal Finance: Awareness, Perception and Adoption Intention among Undergraduate Students

Dr. Kalpana Naidu C¹, Nanditha S²

¹Associate Professor, Department of Commerce (Accounting & Finance), Women's Christian College, Chennai, (Affiliated to University of Madras), India

²Student III B.COM (Accounting & Finance), Women's Christian College, Chennai, (Affiliated to University of Madras), India

Abstract-- Artificial Intelligence (AI) is increasingly becoming part of modern financial services. It is used in areas such as budgeting, expense tracking, fraud detection, digital banking, credit assessment and financial recommendations. The growing presence of AI-based financial tools has created a need to understand how young users view and accept these technologies. Undergraduate students are an important group for such a study because they are regular users of digital services and are gradually developing independent financial habits.

The present study examines the awareness, perception and adoption intention of undergraduate students towards the use of Artificial Intelligence in personal finance. It covers students' awareness of AI in financial services, recognition of specific applications, perceived usefulness, trust and comfort, privacy concerns and intention to use AI-based financial tools. Primary data were collected through a structured questionnaire from students belonging to different academic disciplines. The study uses frequency and percentage analysis, mean and standard deviation, independent-samples t-test, one-way ANOVA and chi-square test. Selected demographic factors such as age, gender, discipline and year of study are also considered. The study is intended to provide an understanding of how students view AI-based financial tools and the factors that are relevant to their willingness to use them.

Keywords-- Artificial Intelligence; Personal Finance; FinTech; Financial Awareness; Student Perception; Technology Adoption

I. INTRODUCTION

Artificial Intelligence has moved from being a specialised technology to an increasingly visible part of everyday financial services. Banks and fintech companies use AI-enabled systems for customer support, fraud detection, expense management, credit assessment and personalised financial services. These applications can process large amounts of information quickly, identify patterns and support users through digital platforms.

II. REVIEW OF LITERATURE

Davis (1989), through the Technology Acceptance Model, explained that perceived usefulness and perceived ease of use influence technology acceptance. This framework is relevant to financial AI because users are more likely to accept a tool when they believe that it improves their financial activities and is convenient to use.

Venkatesh et al. (2003) developed the Unified Theory of Acceptance and Use of Technology, identifying factors such as performance expectancy, effort expectancy, social influence and facilitating conditions as important in technology adoption. These concepts provide a broad basis for examining why users may accept or hesitate to use AI-based financial services.

III. RESEARCH GAP

Several studies have examined fintech, digital banking and general technology adoption. However, undergraduate students' understanding of AI specifically in personal finance requires further attention. Students may use digital financial services frequently without recognising which features are AI-enabled. There is also a need to distinguish general awareness from knowledge of specific applications such as budgeting, fraud detection, credit assessment and personalised financial advice.

IV. OBJECTIVES OF THE STUDY

- To study the demographic profile of the undergraduate respondents.
- To assess the level of awareness of AI in financial services among undergraduate students.
- To identify the major AI applications in personal finance known to the respondents.
- To examine students' perception regarding the usefulness and convenience of AI in personal finance.
- To study the level of trust, comfort and privacy concerns towards AI-based financial services.



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- To examine adoption intention towards AI-based personal financial tools and its association with selected demographic factors.

V. RESEARCH METHODOLOGY

5.1 Research Design

The study follows a descriptive and analytical research design. The descriptive component presents the demographic profile, awareness and perception of respondents. The analytical component examines selected differences and associations using basic statistical tools suitable for an undergraduate commerce project.

5.2 Population and Sample

The target population consists exclusively of undergraduate students. The original questionnaire received 167 responses. During data cleaning, the 18 responses recorded under 'PG/Other' were excluded because they did not satisfy the study's stated undergraduate population. The final analysis therefore consists of 149 valid undergraduate respondents.

5.3 Sampling Method

Convenience and snowball sampling methods were used for collecting responses through a structured questionnaire. The approach enabled the researcher to reach undergraduate students from different disciplines.

5.4 Sources of Data

Primary data were collected through the questionnaire. Secondary information was obtained from books, journal articles and academic literature relating to Artificial Intelligence, fintech, personal finance and technology adoption.

5.5 Research Instrument

The questionnaire contained demographic questions, awareness questions and fifteen five-point Likert-scale statements. The statements covered perceived usefulness, trust and comfort, privacy concern and adoption intention. Additional questions examined sources of learning and prior use or encounter with AI-enabled financial services.

5.6 Statistical Tools

Frequency and percentage analysis were used for the profile and awareness variables. Mean and standard deviation were used to summarise Likert-scale responses. An independent-samples t-test was used to compare adoption intention by gender. One-way ANOVA was used for comparisons across discipline, age and year of study. A chi-square test was used to examine the association between awareness and prior use of AI-enabled financial services.



VI. DATA ANALYSIS AND INTERPRETATION

6.1 Overall Profile of Respondents

Variable	Category	Frequency	Percentage
Age	Below 18	21	14.1%
	18–20	121	81.2%
	21–23	6	4.0%
	Above 23	1	0.7%
Gender	Male	48	32.2%
	Female	100	67.1%
	Prefer not to say	1	0.7%
Discipline	Commerce	82	55.0%
	Engineering/Technology	28	18.8%
	Science	14	9.4%
	Management	11	7.4%
	Arts/Humanities	11	7.4%
	Other	3	2.0%
Year of Study	I Year	30	20.1%
	II Year	27	18.1%
	III Year	92	61.7%

Source: Primary Data

The corrected profile clearly represents undergraduate students only. The largest age group is 18–20 years, accounting for 81.2% of the sample. Students below 18 form 14.1%, while only a small number are in the 21–23 and above-23 categories. This shows that the sample is concentrated among students in the usual undergraduate age range.

Female respondents constitute 67.1% and male respondents 32.2%. Commerce students form the largest academic group at 55.0%, followed by Engineering/Technology at 18.8% and Science at 9.4%. Management and Arts/Humanities each account for 7.4%. Third-year students form the largest year-of-study group at 61.7%, followed by first-year and second-year students.

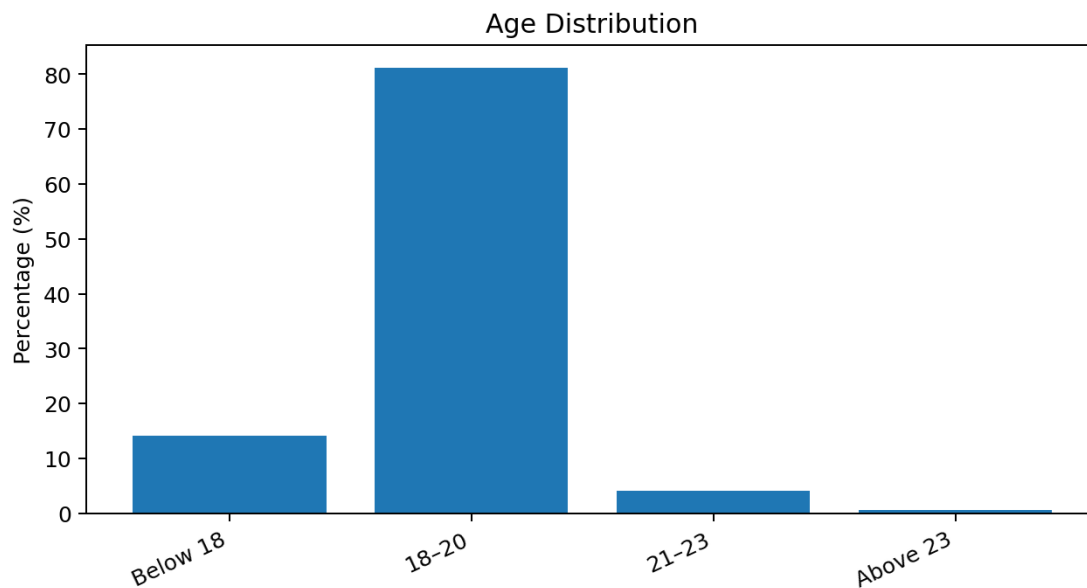


Figure 1. Age Distribution of Undergraduate Respondents

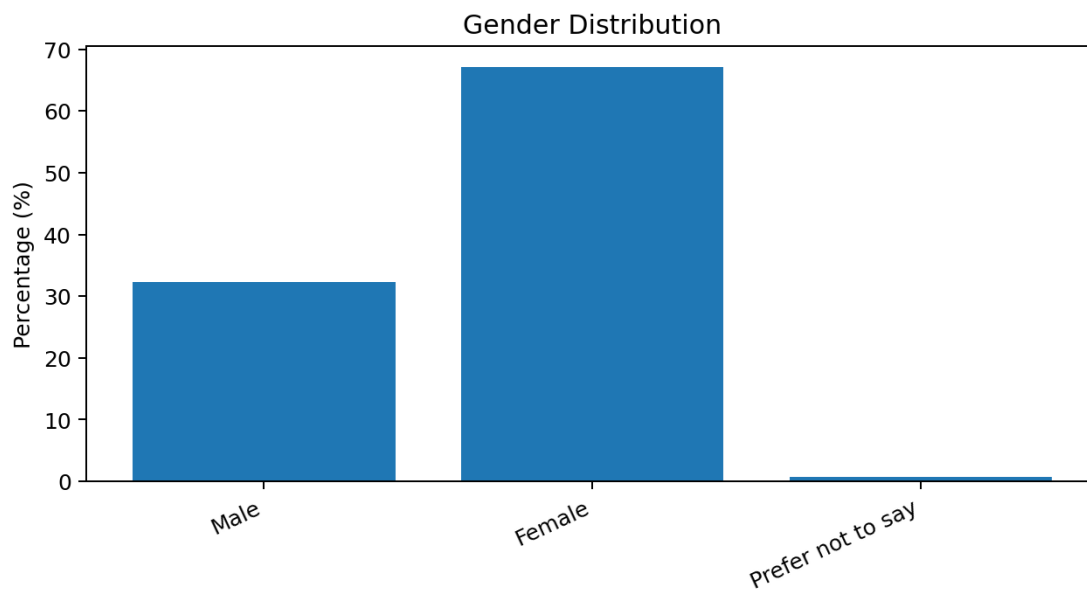


Figure 2. Gender Distribution of Undergraduate Respondents

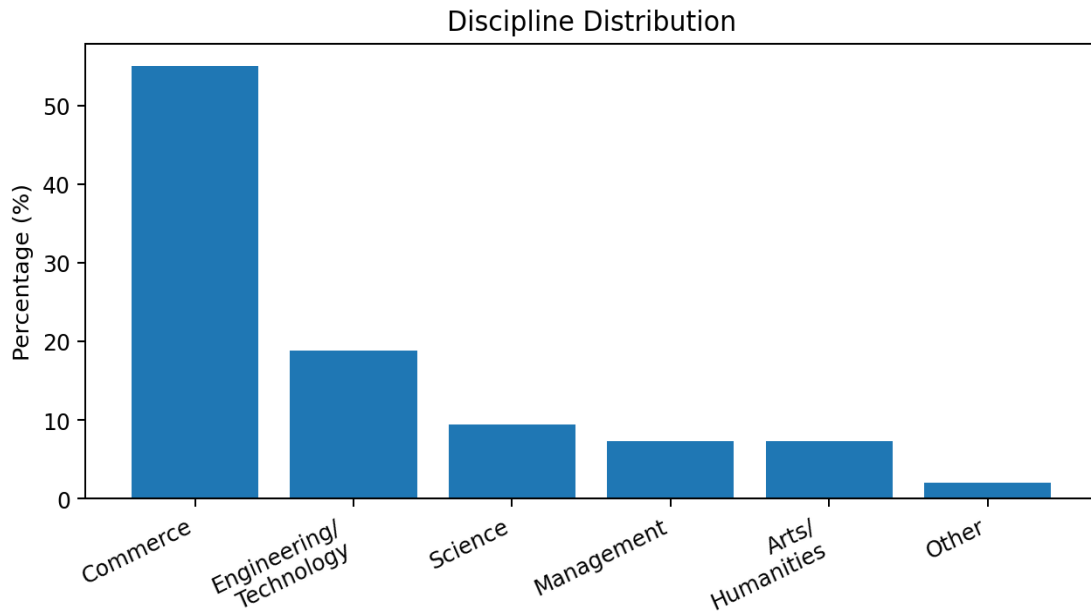


Figure 3. Discipline-wise Distribution of Undergraduate Respondents

6.2 Awareness of AI in Financial Services

Out of the 149 undergraduate respondents, 132 (88.6%) reported that they had heard about the use of AI in financial services, while 17 (11.4%) reported that they had not. This indicates a high level of basic awareness among the respondents.

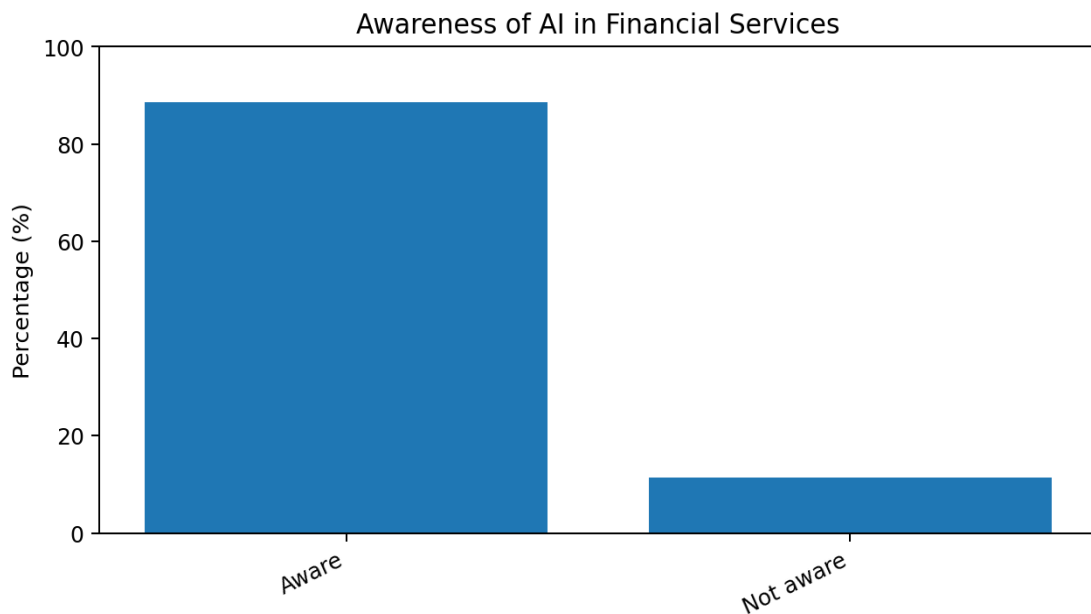


Figure 4. Awareness of AI in Financial Services

The high percentage of awareness indicates that AI is no longer an unfamiliar concept among undergraduate students. Students are likely to encounter AI through banking applications, digital payments, online information sources and general-purpose AI tools. However, awareness should not be equated with detailed knowledge. A student may have heard about AI without understanding how it is applied to budgeting, fraud detection, credit assessment or financial recommendations.

6.3 Prior Use or Encounter with AI-enabled Financial Services

Among the undergraduate respondents, 83 students (55.7%) reported that they had used or encountered an AI-enabled financial service. A further 43 (28.9%) reported that they had not, while 23 (15.4%) were unsure.

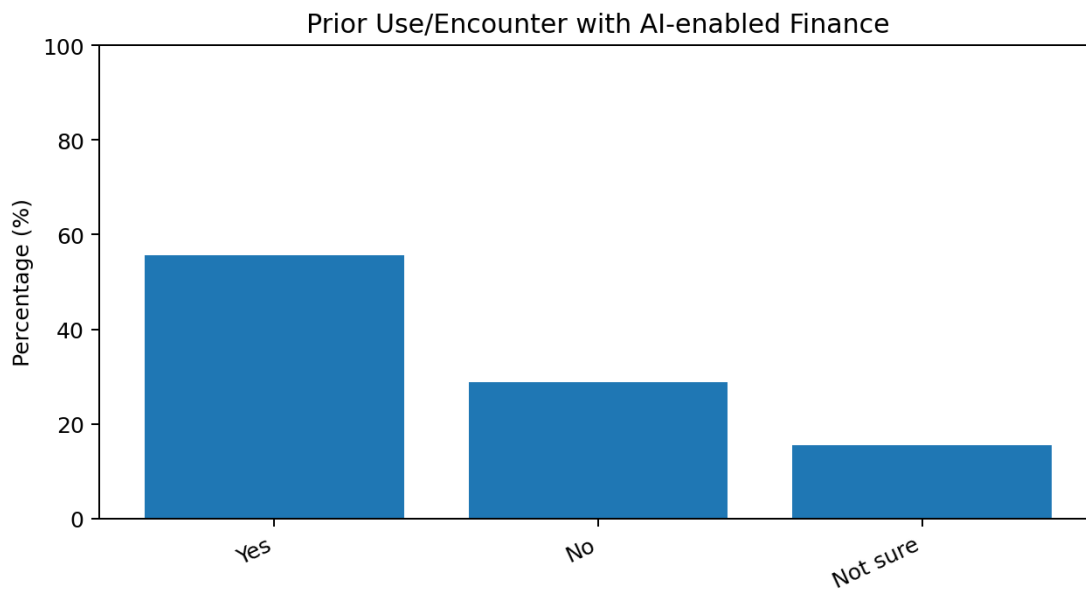


Figure 5. Prior Use or Encounter with AI-enabled Financial Services

6.4 Perceived Usefulness of AI

The six usefulness-related statements show a generally positive perception. The mean scores range from approximately 3.5 to 3.8 on the five-point scale. Students particularly recognise that AI can provide useful financial recommendations and help with faster financial decisions. The responses suggest that students see AI as a tool that can save time, organise information and support financial activities.

At the same time, the scores are not extremely high. This moderate level of agreement may be because many students have limited experience with advanced AI-based personal finance tools.

Familiarity with digital payments does not necessarily mean familiarity with AI-based budgeting or investment applications. Practical demonstrations can therefore help students understand the usefulness of AI more clearly.

6.5 Trust, Comfort and Privacy Concern

Trust is a major consideration in financial technology because financial services involve sensitive personal information. In the present study, students show moderate trust and comfort towards AI-based financial services. The mean for the statement 'I trust AI-based financial recommendations' is lower than the mean for the statement relating to fraud detection.

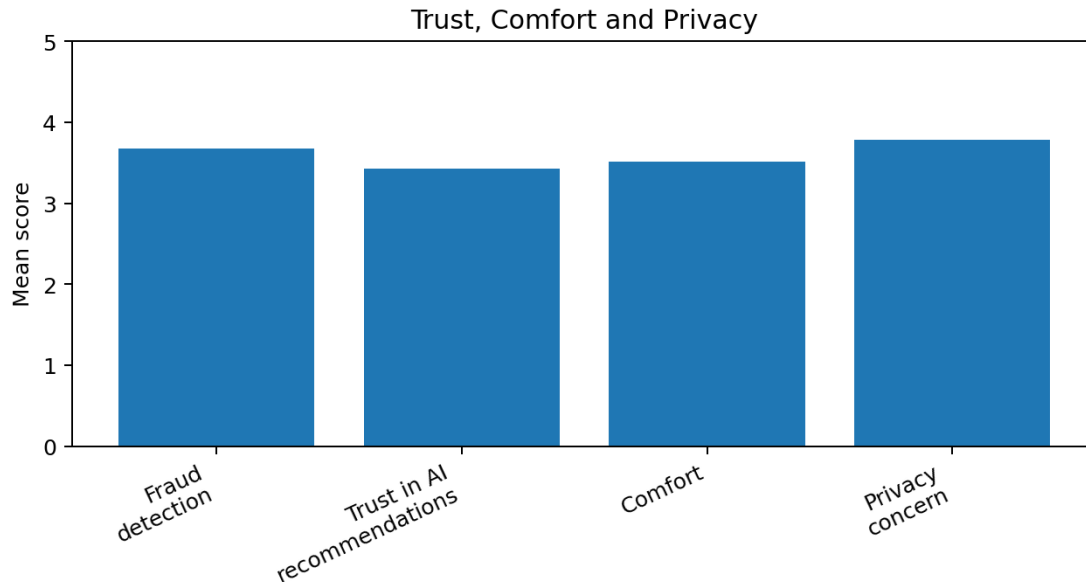


Figure 6. Trust, Comfort and Privacy Concern

Privacy concern is comparatively high. Students are concerned about the privacy of financial information when using AI. This indicates that adoption cannot be considered only from the perspective of convenience. Users also want assurance that their personal and financial information will be handled responsibly. Clear privacy explanations, secure systems and user control over data can therefore contribute to greater confidence.

Recent research similarly identifies trust as an important factor in AI-enabled financial technology adoption, while current regulatory discussions caution users against treating

general-purpose AI output as regulated financial advice.
☐cite☐turn0search1☐turn0news12☐

6.6 Adoption Intention

The five adoption-intention statements show a moderately positive pattern. The overall adoption intention mean is 3.65. The mean for willingness to use AI-based tools for managing personal finances is 3.49, while the mean for considering AI-based investment recommendations is 3.70. The mean for future use is 3.69, and recommending useful AI-based tools to others records 3.71.

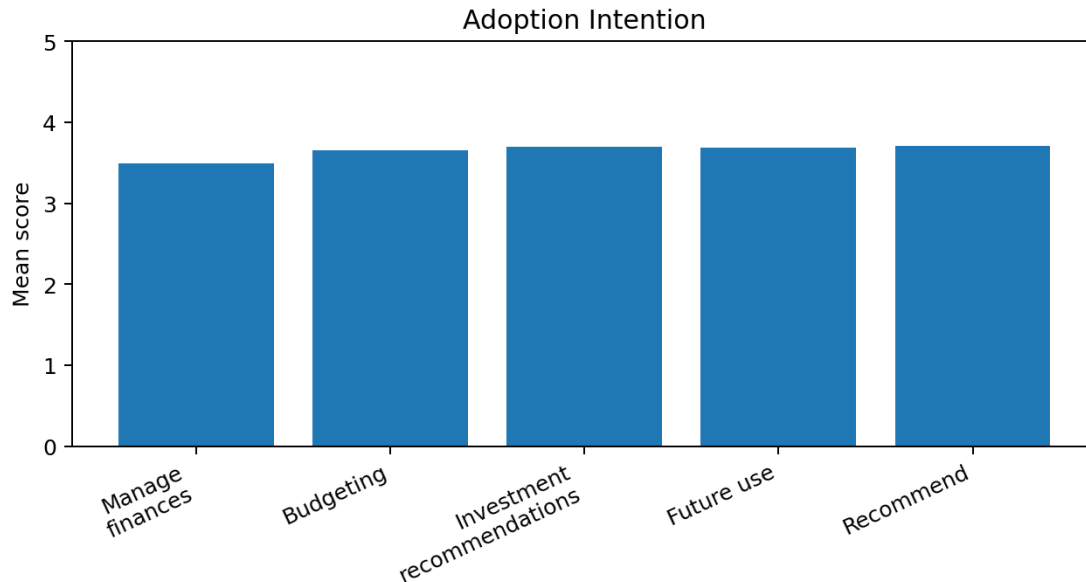


Figure 7. Adoption Intention – Selected Mean Scores

These responses indicate that students are generally willing to consider AI-based financial tools, but willingness varies according to the purpose. Investment recommendations and future use receive relatively stronger responses than the general statement about managing personal finances. This may mean that students are interested in AI as an additional source of information rather than as a complete replacement for their own judgement.

This interpretation is consistent with the broader issue of trust. Users can be positive about AI while still wanting to verify important information. Current evidence on young users also points to increasing use of AI for financial information alongside concerns about accuracy, regulation and the need for human judgement.

[cite turn0news12](#) [turn0news25](#)

6.7 Gender-wise Comparison – Independent Samples t-Test

Gender	N	Mean AD Score	t-value	p-value	Decision
Male	48	4.09	4.45	0.0000	Significant
Female	100	3.45	—	—	—

The independent-samples t-test gives $t = 4.45$, $p = 0.0000$. Since the p-value is below 0.05, the difference in adoption intention between male and female respondents is statistically significant.

The male mean is 4.09, compared with 3.45 for female respondents.

6.8 Discipline-wise Comparison – One-way ANOVA

Discipline	N	Mean AD	Std. Dev.
Management	11	4.53	0.63
Other	3	3.87	1.03
Science	14	3.81	0.80
Commerce	82	3.65	0.85
Arts/Humanities	11	3.49	1.11
Engineering/Technology	28	3.28	0.69

The discipline-wise ANOVA gives $F = 3.84$, $p = 0.0027$. Since p is below 0.05, adoption intention differs significantly across the academic disciplines represented in the sample.

Management students have the highest mean adoption intention, while Engineering/Technology students record a comparatively lower mean among the larger groups.

Commerce students, who constitute the majority of the sample, show a moderate mean. The result suggests that academic exposure may be related to how students perceive AI in personal finance. However, the smaller numbers in some categories mean that the result should be treated as an indication rather than a universal conclusion.

6.9 Age-wise Comparison – One-way ANOVA

Age Group	N	Mean AD	Std. Dev.
18-20	121	3.62	0.89
21-23	6	4.20	0.73
Above 23	1	3.20	
Below 18	21	3.67	0.78

The age-wise ANOVA gives $F = 0.93$, $p = 0.4265$. Since the p -value is above 0.05, there is no statistically significant difference in adoption intention across age groups in the undergraduate sample.

The 21–23 group has a higher descriptive mean, but the difference is not statistically significant. More importantly, the above-23 category contains only one respondent, so its descriptive value cannot be used to make a reliable group comparison.

The non-significant result indicates that age, within the characteristics of this sample, does not provide sufficient evidence of a difference in adoption intention.

The result also suggests that awareness and financial-AI education can be offered across the undergraduate population rather than being limited to a particular age group.

6.10 Year of Study – One-way ANOVA

Year	N	Mean AD	Std. Dev.
I Year	30	3.49	0.65
II Year	27	3.70	1.01
III Year	92	3.69	0.88

The year-of-study ANOVA gives $F = 0.62$, $p = 0.5390$. The p-value is greater than 0.05, indicating that adoption intention does not differ significantly across first-, second- and third-year undergraduate students.

The finding suggests that students' willingness to adopt AI-based financial tools is not simply a function of being in

a higher year of study. Students can be exposed to digital financial services from the early stages of their undergraduate education. Therefore, financial-AI literacy can be introduced from the first year and reinforced in later semesters.

6.11 Awareness and Prior Usage – Chi-square Test

Awareness	Used: No	Not sure	Used: Yes	Total
No	9	4	4	17
Yes	34	19	79	132
Total	43	23	83	149

The chi-square test gives $\chi^2 = 8.24$, $p = 0.0163$. Since the p-value is below 0.05, there is a statistically significant association between awareness of AI in financial services and prior use or encounter with an AI-enabled financial service.

Among students who are aware of AI in financial services, 79 reported that they had used or encountered an AI-enabled service. In contrast, only four of the students who were not aware reported such use. The result indicates that awareness and exposure are related in the present sample.

VII. MAJOR FINDINGS

- After data cleaning, the final sample consists of 149 undergraduate students. The 18 PG/Other responses were excluded because the study population is undergraduate students.
- Students aged 18–20 form the largest group, accounting for 81.2% of the undergraduate sample.
- Female students constitute 67.1% of respondents, while male students constitute 32.2%.
- Commerce students form the largest disciplinary group at 55.0%, followed by Engineering/Technology at 18.8%.
- Third-year students constitute 61.7% of the sample, making them the largest year-of-study group.
- Basic awareness of AI in financial services is high, with 88.6% reporting that they have heard about it.
- More than half of the students, 55.7%, report having used or encountered an AI-enabled financial service.
- Students' uncertainty about whether they have used AI indicates that AI features are not always visible to users.

- Students have a generally positive but moderate perception of AI's usefulness in personal financial management.
- Trust in AI-based financial recommendations is lower than confidence in AI for fraud detection, suggesting greater caution when AI directly influences financial decisions.
- Privacy is an important concern and should be addressed through clear information about data collection and protection.
- Overall adoption intention is moderately positive, showing that students are open to using AI-based financial tools.
- Gender shows a statistically significant difference in adoption intention, with male respondents recording the higher mean in this sample.
- Academic discipline shows a statistically significant difference in adoption intention.
- Age does not show a statistically significant difference in adoption intention in the undergraduate sample.
- Year of study does not show a statistically significant difference in adoption intention.
- Awareness of AI in financial services is significantly associated with prior use or encounter with AI-enabled financial services.
- The findings indicate that awareness, practical exposure, usefulness, trust and privacy are important considerations in understanding students' attitudes towards AI in personal finance.
- Because the sample was collected through convenience and snowball methods, the findings should be treated as sample-specific rather than representative of all undergraduate students.

VIII. SUGGESTIONS

- Colleges should organise simple financial-AI literacy programmes explaining how AI is used in banking, expense management, fraud detection and financial recommendations.
- Students should be shown practical demonstrations rather than being given only theoretical definitions of Artificial Intelligence.
- Financial education should explain the difference between using AI for information and depending on AI for major financial decisions.
- Institutions should encourage students to verify important AI-generated financial information using reliable sources before acting on it.
- Financial institutions should clearly disclose when AI is used in a customer-facing financial service so that users understand what they are interacting with.
- AI-based financial tools should provide understandable explanations for recommendations and alerts wherever possible. Greater transparency can improve trust.
- Privacy concerns should be addressed by clearly explaining what financial information is collected, why it is required and how it is protected.
- Students should be educated about the limitations of AI, including the possibility of inaccurate or incomplete outputs. Current evidence also shows that young users may use AI for financial decisions while misunderstanding whether such information is regulated or protected. [cite]turn0news12[
- Colleges should provide financial-AI awareness across disciplines because the present study finds differences between academic groups.
- Awareness programmes should include both male and female students equally. Since the present sample shows a gender difference in adoption intention, confidence-building activities can help ensure inclusive participation.
- Financial-AI literacy should begin from the first year because year of study was not a significant differentiating factor. Students can gradually develop their understanding throughout the undergraduate programme.
- AI should be presented as a support tool rather than a complete substitute for personal judgement or professional financial advice.
- Future programmes can combine accounting, finance and technology concepts so that Commerce students understand both the opportunities and risks associated with AI-based financial services.

IX. CONCLUSION

Artificial Intelligence is becoming increasingly relevant to personal financial services, and undergraduate students are an important group for understanding its future adoption. The present study examined awareness, perception and adoption intention among undergraduate students while also considering usefulness, trust, comfort, privacy concerns and selected demographic factors.

The corrected analysis is based exclusively on 149 undergraduate respondents. This makes the title, objectives, population, sample and statistical analysis consistent with one another. The study shows that basic awareness of AI in financial services is high, but awareness does not always mean detailed understanding. Many students are aware of AI but are not always certain whether they have actually encountered an AI-enabled financial service.

Students generally recognise the usefulness of AI in personal finance and show a moderately positive intention to adopt AI-based tools. At the same time, trust is not equally strong for all applications. Students appear more comfortable with AI performing analytical or protective functions such as fraud detection than with relying entirely on AI-based financial recommendations. Privacy is another important consideration.

The statistical analysis shows significant differences in adoption intention by gender and academic discipline, while age and year of study do not show significant differences in this sample. Awareness is significantly associated with prior use or encounter with AI-enabled financial services. These results suggest that students' adoption of AI is shaped by a combination of awareness, exposure, perceived usefulness and confidence.

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