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AN EMPIRICAL STUDY ON ROLE OF ARTIFICIAL INTELLIGENCE IN INVESTMENT DECISION MAKING

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ABSTRACT

*The advancement of technology has entered in every arena health, education, Finance, entertainment etc. Magnifi, Nvidia. Broadcom etc. are AI tools in the investment arena. Investors do invest in fixed deposit, gold, real estate, mutual funds, Stocks , derivatives .The implication of AI helps Investors to take right decision of selection and adoption of investment strategies. The study has been conducted empirical research considering 150 people from Mumbai City. It study wanted to know the role of AI in investment decision making and how far Investors are aware about available AI tools in investment. The result shows, r=-1, proving Awareness of AI among investors does not fosters the adoption of AI in investment decision making. The prominent reason of non-adoption of AI in investment are lack of confidence, lack of guidance, fear of getting data hacked. It is advisable to government & non-govt agencies to conduct campaign of AI usage and must keep 24*7 help desk to tackle difficulties faced by users.*

KEYWORDS: *Artificial Intelligence (AI), Investment decision, AI Investment Apps, Investment avenues.*

INTRODUCTION

With the rapid change occurred in world the investor have multifold options to see help from different drivers. Artificial Intelligence is one of the popular tool in Asset Management. some artificial intelligence tools are very crucial in commerce such as product Optimisation, inventory planning, personal assistant etc. Artificial intelligence plays vital role in inventory management as it analysis the existing data and generate market prediction. Artificial Intelligence with the utilisation of machine learning able to reveal the patterns and relationship which might be difficult for human investor to identify. E.g. Artificial Intelligence can identify the pattern followed by in stock prices and can predict future Trend.

In present scenario people are known to countless investment options like Mutual Fund ,Stock. E -Gold, Bonds etc. but they don't have idea about how to invest and when to invest. The artificial intelligence provides valuable information about different stock options available, there previous year data, analysis of previous year data, investment performance et etc. Which help investor to identify potential investment opportunities.

Magnifi is one of the artificial intelligence investing assistance which help investor to make correct investing decisions. Nvidia and Broadcom are also the artificial intelligence investment tools. Algo Trader offers AI driver algorithmic trading for retail and institutional traders. Apart from these the investor can opt investment information asking different artificial intelligence such as ChatGPT, Gemini, Copilot, Built in , Google Assistant etc.

INVESTMENT AVENUES

There are many investment avenues available for investment out of all few are shown below.

1. **Fixed Deposit:** It is the oldest and considered safest mode of investment with higher liquidity. The return received are low compared to stock market, insurance etc.
2. **Gold:** The oldest mode of investment with moderate liquidity but considered as much useful during family crisis. The liquidity of gold has been increased though E-Gold where making ornaments by using gold is not required. It is the safest option too.
3. **Real Estate:** The rise in inflation and population leads to increase the value of real estate. The value keep on increasing in upward direction. During deflation the price may go down to a certain extent.
4. **Mutual Fund** : The safest mode of investment among modern investment avenues. As per the risk bearing capability the investor invests in equity, debt or hybrid mode. Also as per the requirement of fund investor chooses to invest for short-period or long period of time.
5. **Stock** : It is the highest risky mode of investment. It is seen higher the risk,highest the return on investment . investment in equity gives higher return than debt.
6. **Derivatives**: Investment in crypto currencies like Bitcoin and Ethereum , these are traded on decentralised exchanges.

ARTIFICIAL INTELLIGENCE INVESTMENT APPS

1. Groww: The most popular investment app for stock and Mutual Fund, provides the statics of all companies investment and also suggest the suitable option.

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2. Upstox: It is a popular broking app known for its economical charges on comodities.
3. Sharekhan : A mobile app with usage of it a investor can trade in share market and Mutual Fund.
4. Piggy Mutual Fund App: A easiest platform to invest in Mutual Fund without paying commission to third person.

REVIEW OF LITERATURE

1. **K. Prashanti and P.Lalitha (January2024),** studied the role of artificial intelligence in investment management with the aim to analyse the perception of investors on different investment options and role of artificial intelligence in investment management and available opportunities using AI in investment. the research study was descriptive in nature you seen Quantitative approach purposive sampling used for study including 80 respondents. it is found though People are aware about AI investment and getting better result with the use of AI but same people still hesitate to use AI in investment due to lack of awareness and compatibility.
2. **O.B. Onyenahazi and B.O Antui (October2024)** examined the role of AI in investment decision making: Opportunities and risk for Financial Institutions. It is observed that AI technology are helping institution and investors to analyse financial data appropriately. AI is helping to improve the accuracy of forecasting, minimising human error, reduces costs. Though AI offers significant opportunities for increasing investment decision making but final decision firm have to carefully consider with associated risk and implications. Institution must train their employees to understand AI Technologies and its application. Firm needs to establish ethical guidelines also encourage hybrid decision making process Ultimately AI is going to play a crucial role in the future of finance.
3. **R.Karthika, A. Arburaj and S. Raja(October 2023)**: The study analyzed AI in Investment, Assets and Warehouse Management. It Is found that AI help investors and fund manager with data analysis tools, leads to informed a precise decision in investment management. AI empowers towards maximizing returns and optimising risk mitigation which result in cost saving, faster delivery and customer satisfaction. In future artificial intelligence will be highest used technology.
4. **H. Maheshwari and A. Samantaray (January 2025),** examined the influence of AI on investment decision making among Gen Z Investors in emerging markets. The data collected through questionnaire from 457 Gen Z investor in India .The study has been analysed using Partial Least Square Structured Equation Modelling(PLS-SEM), result shows that there is a significant relationship between overconfidence bias(OCB), fear of missing out(FOMO) herding bias (HB) and Regret Aversion Bias(RAB) on Investment Decision Making(IDM).

RESEARCH GAP

As application of artificial intelligence is still new to the market still very few research are conducted throughout the world, among all no research has been carried out in Mumbai city concerning using of AI in investment decision making. The researcher aimed to fill the available gap by conducting such study.

OBJECTIVES

1. To study the role of Artificial Intelligence in investment decision making.
2. To know the awareness of Artificial Intelligence among investors.

HYPOTHESIS

H0:Awareness of AI among investors does not fosters the adoption of AI in investment decision making.
H1: Awareness of AI among investors fosters the adoption of AI in investment decision making.

RESEARCH METHODOLOGY

- Type of Research : The current study is based on empirical research.
- Data Collection Methods: Data collected through survey and questionnaire methods.
- Primary Data : The well structured questionnaire were prepared and circulated among 150 dwellers of Mumbai city.
- Secondary Data : To get extensive knowledge of usage of AI on investment decisions secondary data collected through research articles, newspaper, magazine , websites periodicals etc.
- Sampling Design: 150 responses collected from Mumbai city.

DATA ANALYSIS AND INTERPRETATION

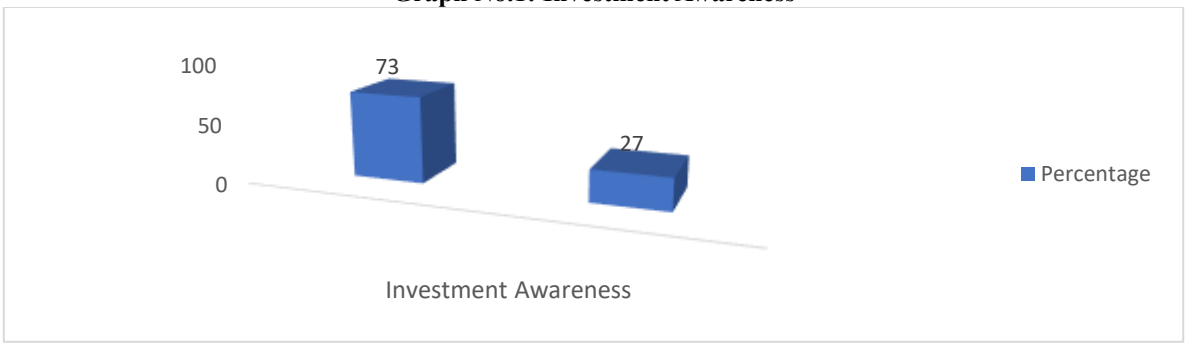
Collected data though survey method are analyses as follows:

Table No.1: Investment Awareness

Options	Frequency	Percentage
Yes	110	73
No	40	27
Total	150	100

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Graph No.1: Investment Awareness

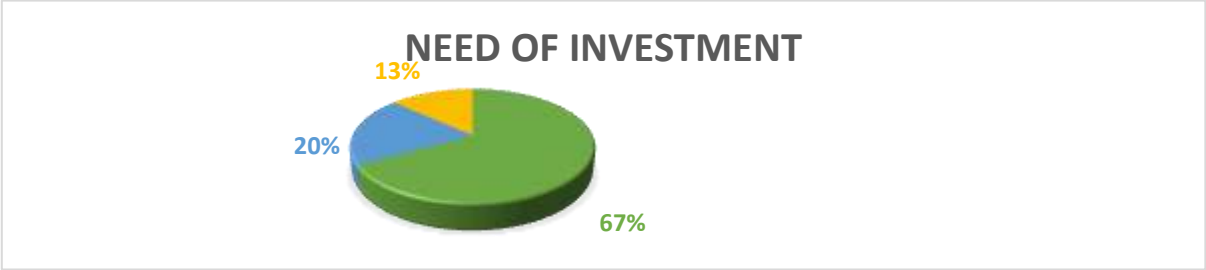


From the above it can be seen that 100 respondents i.e. 73% investors are known to investment awareness and 27% are still not clear about investment awareness.

Table No.2.Need of Investment

Options	Frequency	Percentage
Yes	100	67
No	30	20
Maybe	20	13
Total	150	100

Graph No.2: Need of Investment



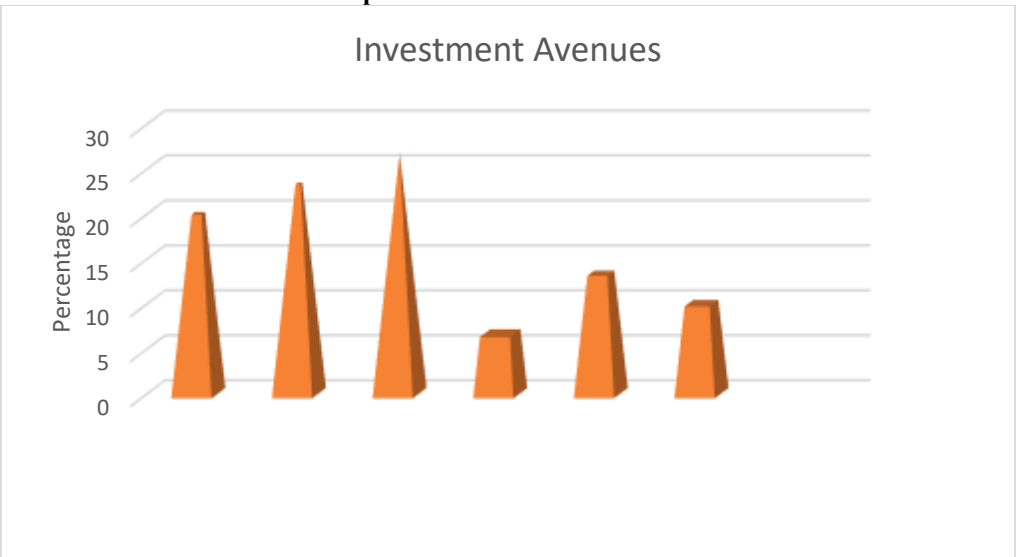
It is found that 67% people are in favour of need of investment, 20% are not agree whereas 13% respondents are not sure about requirement of Investment .

Table No.3. Investment Avenues

Options	Frequency	Percentage
Fixed Deposit	30	20
Real Estate	35	23
Gold	40	27
Bond	10	7
Mutual Fund	20	13
Shares	15	10
Total	150	100

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Graph No.3: Investment Avenues

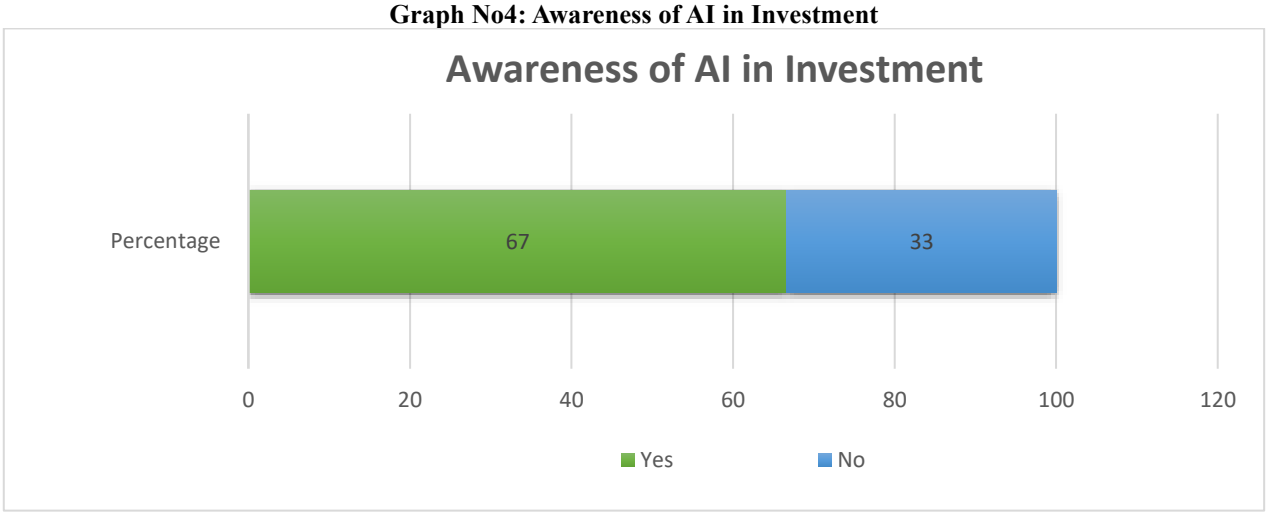


It is seen people have shown much interest towards the traditional investment such as Gold (27%) Real Estate(23%)and Fixed Deposit(20%) than modern investment avenues such as Mutual fund (13%), Shares(10%) and Bond(7%).

Table No.4: Awareness of AI in Investment:

Options	Frequency	Percentage
Yes	100	67
No	50	33
Total	150	100

Graph No4: Awareness of AI in Investment



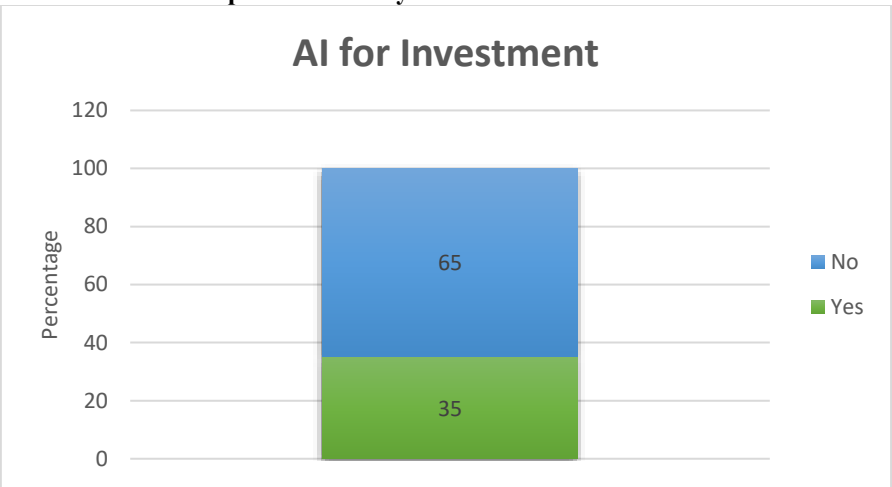
It is noted that 100 respondents (67%) are aware of Artificial Intelligence tools used in Investment and 50 investors (33%) are not aware about Artificial Intelligence tools used in Investment.

Table No.5. Have you used AI for Investment

Options	Frequency	Percentage
Yes	53	35
No	97	65
Total	150	100

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Graph No.5. Have you used AI for Investment

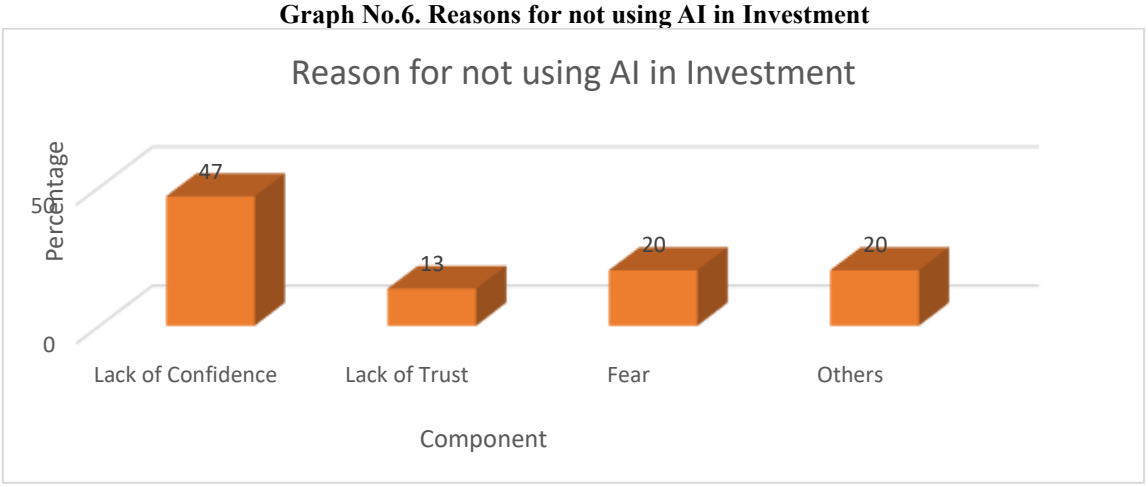


From the above graph it is stated that though many investors are about Artificial Intelligence available for Investment but they are not personally using it . More than 60% investors are not taking

Table No.6. Reasons for not using AI in Investment

Options	Frequency	Percentage
Lack of Confidence	70	47
Lack of Trust	20	13
Fear	30	20
Others	30	20
Total	150	100

Graph No.6. Reasons for not using AI in Investment



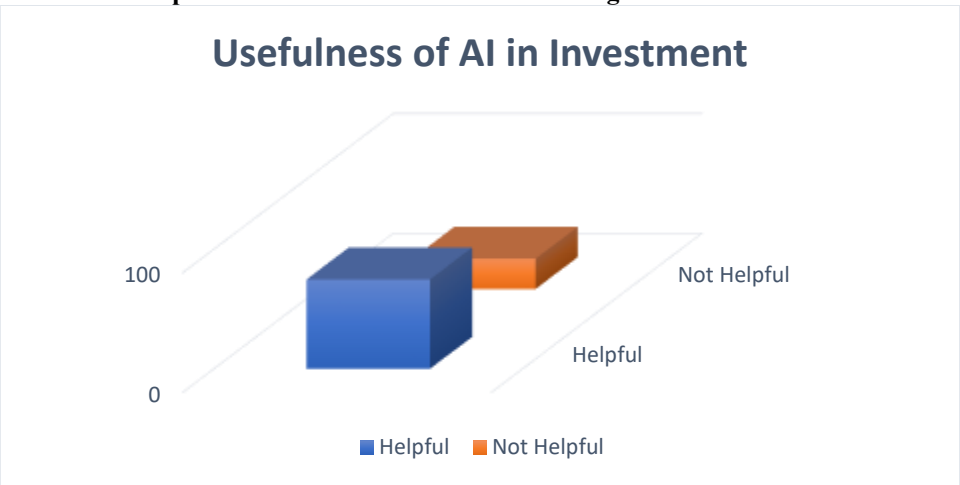
From the above it is observed the respondents reason for not using Artificial Intelligence in Investment are lack of confidence (47%), lack of trust on AI tools (13%), fear (20%) and other factors(20%).

Table No.7.Usefulness of Artificial Intelligence in Investment

Options	Frequency	Percentage
Helpful	112	75
Not Helpful	38	25
Total	150	100

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Graph No.7. Usefulness of Artificial Intelligence in Investment

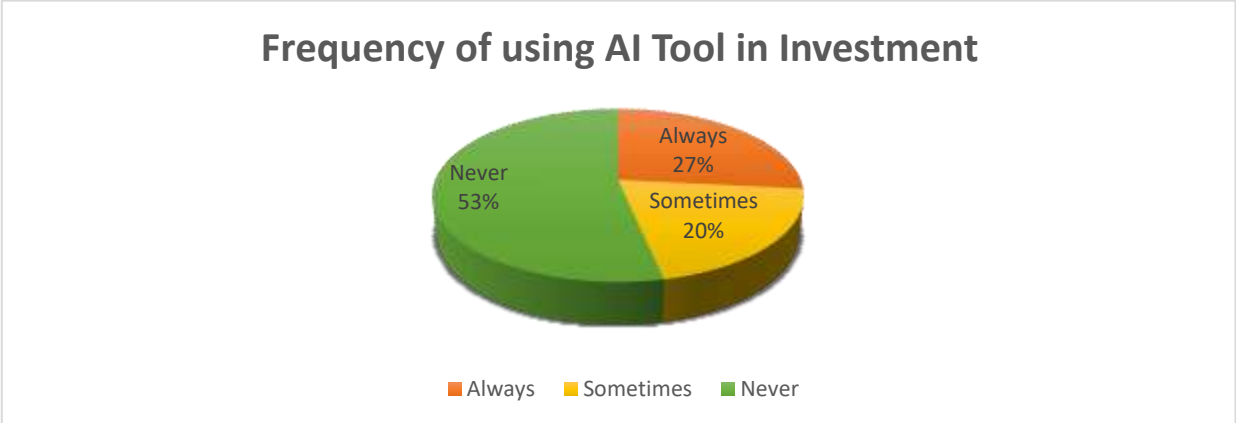


It is noted that two-third respondents (112) i.e. 75% are in thought there is usefulness of artificial intelligence in Investment and one-third (38) i.e. 25% thinks artificial intelligence are not useful in investment adoption.

Table No.8: Frequency of using Artificial Intelligence in Investment

options	Frequency	Percentage
Always	40	27
Sometimes	30	20
Never	80	53
Total	150	100

Graph No.8.: Frequency of using Artificial Intelligence in Investment



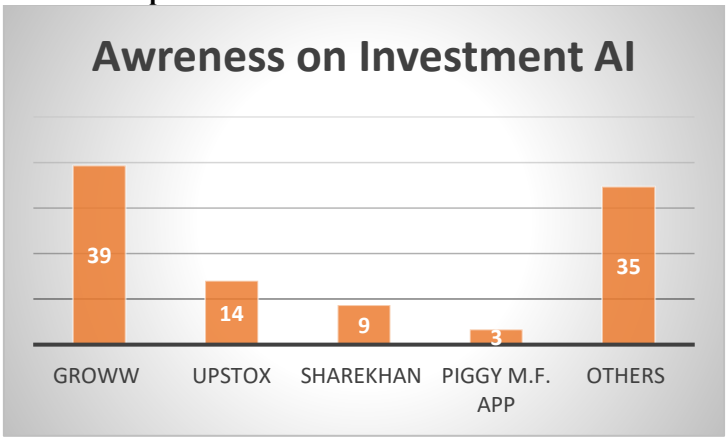
Among 150 respondents only 27% people are using artificial intelligence tools in investment frequently, 20% people are taking help of artificially

Table No.9: Awareness on Investment AI Tool

Options	Frequency	Percentage
Groww	59	39
Upstox	21	14
Sharekhan	13	9
Piggy M.F. App	05	3
Others	52	35
Total	150	100

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Graph No9: Awareness on Investment AI Tool



From the study it is observed that Groww is most known (39%)AI based investment app than Upstox(14%), Sharekhan(9%) , Piggy Mutual Fund App (3%)aprt from all these investors preferred to take help from other AI apps(35%).

- **Hypothesis Testing :** The hypothesis tested with the use of spearman's co-relation.

	Awareness of AI	*Usage of AI*
Awareness	1	
Usage	-1	1

Source: Correlation

Here, r= -1, shows perfect negative co-relation , leads to acceptance of null hypothesis i.e. Awareness of AI among investors does not fosters the adoption of AI in investment decision making.

LIMITATIONS

The study is conducted within Limited period of time in Mumbai city only. A slowly and gradually upgradation in Artificial Intelligence (AI) will change mind set of people after the specific period of time then the collected data may not be useful for longer period of time. Also, collected response may not represent the universe of the study.

FINDINGS

- Most of the respondents are aware of Artificial Intelligence(AI) in Investment.
- Many of the investors feels safe to invest in fixed deposit
- Majority of investors are not relying on AI for investing decision.
- Lack of confidence leads to fear of using AI in investment

CONCLUSION

Artificial Intelligence (AI) has been entered in every arena. it has also transformed the financial industry. From the above the study , it is concluded that though people are aware about AI but till because of improper guidance/ knowledge they fear to take help of AI personally. The institution has benefited a lot than common people because of accessibility of AI.

SUGGESTIONS

- More awareness campaign must be conducted by investing agencies for the common people.
- Proper training is to be given to employees of investing institution.
- The AI investment apps must be user friendly.

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