A Study on the Utility of Artificial Intelligence (AI) in Human Life

Asmita Singh[1], R. Anjali[2]

[1,2]*Student, Department of Commerce, Mount Carmel College, Bengaluru, India*

Abstract: **The current research has been undertaken to examine the utility of Artificial Intelligence (AI) in human life in the present time. Artificial Intelligence is currently evolving to benefit many different industries and its field of study includes many theories, methods and technology.**
Objectives:
- **Outcomes of this study help us to get a closer look at the prime challenges of Artificial Intelligence.**
- **The applicability of Artificial Intelligence in our daily life.**
- **The perception in the public regarding growth of Artificial Intelligence.**

The analysis of the findings can help us gauge the trends and positions of this new concept of Artificial Intelligence in the present society. Overall, this research paper focuses on the level of awareness regarding Artificial Intelligence among the general population. The researchers conducted a survey and collected the responses of 100 respondents based on which the analysis and interpretation was made.

Keywords: **Artificial Intelligence, human life**

1. Introduction

Artificial Intelligence refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. Such machines exhibit traits associated with a human mind such as learning and problem solving. Learning, reasoning and perception are therefore considered to be goals of artificial intelligence. With advancement in technology A.I. has also grown by leaps and bounds and has found its applicability across a plethora of industries and users. In certain cases, A.I. has surpassed the existing intellectual capacity possessed by today's human experts and is therefore considered a subject generating great amount of curiosity. The world has certainly become a lot more efficient through the adoption of AI in every imaginable space ranging from technology to knowledge.

Machine Learning and Deep Learning have revolutionized the way complicated problems are solved in organizations. Its growth in popularity is evident from the fact that large tech companies such as Google are now giving priority to AI in form of investments and research. AI oriented innovations are now commonplace in the fields of healthcare, banking, finance, marketing, autonomous vehicles, finance, space exploration, artificial creativity and marketing to name a few. The extensive reach has created an indelible impact on our society.

AI is highly scrutinized because of the various global risks and ethical challenges associated with it. One common idea is that increase in automation will bring about a massive increase in unemployment. Another contentious issue advocates that AI will soon possess the power to pose an existential threat to humanity. Should intelligent systems such as robots be given the same rights as humans is another controversial topic up for debate. People also worry about how the unintended consequences of using AI can be avoided. In the present era such technology has been influencing our behavior and the dependency on it has increased to an unprecedented extent.

Thus in spite of proving its worth, AI continues to face its share of criticism, especially from people outside of the technology sector who have limited understanding towards it. Hence, it becomes even more important to share relevant information regarding its uses and benefits amongst the common population in order to eliminate all their negative impressions. Companies of all sizes across the globe in both public and private sectors should work in cohesion to achieve this.

It won't be wrong to conclude that when used right AI holds potential to bring monumental benefits to humanity. But the consequences could be detrimental if it falls in the wrong hands or when insufficient care is taken for safety and unforeseen side effects.

2. Utility of artificial intelligence in human life

Artificial intelligence assists humans in all spheres of life. Here are a few examples that highlight the same:

Marketing: Search engines now personalize the customer's experience on the basis of their history that helps in establishing a close relationship with them. Tools such as Google Analytics do so by keeping a track of the user's location, browser, device and time spent on each page.

Online stores come with high tech customer support and AI enabled customer assistants.

Healthcare: From safeguarding patients' personal records against *cybercriminals* to assisting in surgeries AI is implemented in numerous frontiers that helps in reducing time and costs by streamlining processes. Case in point Coala life is a company that has a digitalized device that can find cardiac diseases.

Finance: Finance sector has begun to quickly implement

machine learning, algorithmic trading, adaptive intelligence, chatbots, and automation etc. into an array of processes. Companies such as MasterCard and RBS WorldPay have relied on AI and Deep Learning to detect fraudulent transaction patterns and prevent card fraud for years now. In the age of ultra-high-frequency trading, AI is being used to improve stock trading performance and boost profit.

Autonomous Vehicles: AI is impacting the automotive industry which is evident from the popularity of self-driving cars. Waymo has deployed their first AI-based public ride-hailing service in Phoenix. The AI system collects data from the vehicles radar, cameras, GPS, and cloud services to produce control signals that operate the vehicle. Drones are being used to deliver shipments.

Travel and Navigation: AI is helping people by suggesting possible efficient routes to home to making travel arrangements for them. *Chatbots* are also changing the travel industry rapidly by facilitating human-like interaction with consumers for travel recommendations, better booking prices, and faster response times. Google Maps is a common tool used by people of all ages.

Agriculture: Automation and robotics are being used to help farmers find more efficient ways to protect their crops from weeds. Berlin-based agricultural tech start-up called PEAT, has developed an application called Plantix that identifies potential defects and nutrient deficiencies in the soil through images.

3. Challenges of artificial intelligence

Building Trust: Due to the involvement of science and algorithms many people find it difficult to understand its functioning.

Lack of skilled workers: There is a great need for more data scientists, machine learning experts, and other technical professionals who can build out AI solutions and services. Professionals require training to efficiently use AI in organizations.

Investment: Implementation of AI requires exorbitant funds which not all business owners can provide.

Software malfunction: Due to the involvement of softwares and algorithms, accountability and finding cause of errors becomes difficult.

Racism: As AI systems are created by humans who can biased and judgmental, it can't always be trusted to be fair and neutral.

4. Literature review

- *Effective Altruism Foundation (2015) – the article titled "Artificial Intelligence Opportunities and Risks"*. The paper discusses about advantages and risks of current AIs, automation and unemployment, general intelligence and super intelligence, artificial consciousness.
  The following individuals have contributed for this paper –
    1. Adriano Mannino, Philosopher & Co – President, Effective Altruism Foundation.

2. David Althaus, Assistant Director, Foundation Research Institute.
3. Jonathan Erhardt, Scientific consultant, Effective Altruism Foundation.
4. Lukas Gloor, Researcher, Foundation Research Institute.
5. Drian Hutter, Physics Department, University of Basel.
6. Thomas Metzinger, Professor of Philosophy, University of Mainz.

5. Statement of problem

- To examine the perception of the general population towards AI.
- Finding out the key challenges pertaining to AI.

6. Objectives of the study

- To ascertain the awareness in the general population towards AI.
- To gauge their willingness to be closely involved with AI.
- Outcomes of this study help us to get a closer look at the prime challenges of Artificial Intelligence.
- The applicability of Artificial Intelligence in our daily life.

7. Scope of the study

- As AI has wide spread applicability in various frontiers, hence people from all age groups have been included in this study. This helped us to get a closer look at what they think of this concept.
- Half of the sample size consisted of university students.

8. Limitations of the study

- Google questionnaire has been used for the survey, so people without internet access were not a part of the sample.
- The sample size is close to 100. Therefore, generalization of the results is not possible.
- The findings of the study cannot be generalized to any other research or study.

9. Research methodology

The given study includes people from all age groups. In order to achieve the objectives of the study, structured questionnaires were sent via internet to the sample population. Demographic factors of all the respondents were included in the survey for better understanding of each sample. Data from primary sources has been tabulated and analysed. Findings are summarized, and suggestions have been given.

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10. Sample size

- The sample size consists of 100 young individuals, most of whom are pursuing their education.
- Convenience Sampling Technique has been used for the survey.
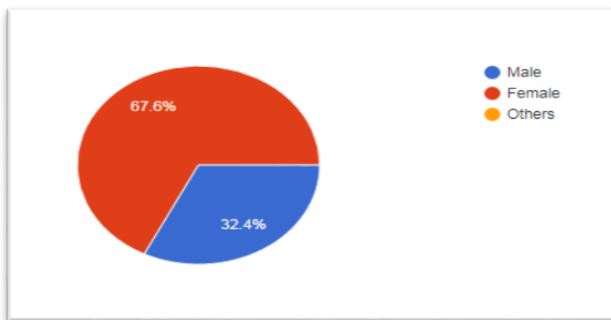
11. Analysis and interpretation

Chart 1: Representing Age of Respondents (102)
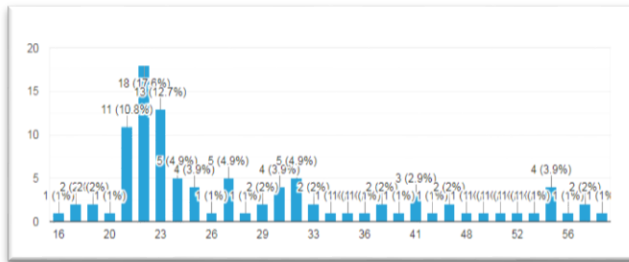
Analysis and interpretation:

From the above table, it can be ascertained that the majority of the respondents belong to the age group 20-25 which constitutes 52% percent of the sample. The age group 26-58, and 16-19 comprise 48% of the sample.
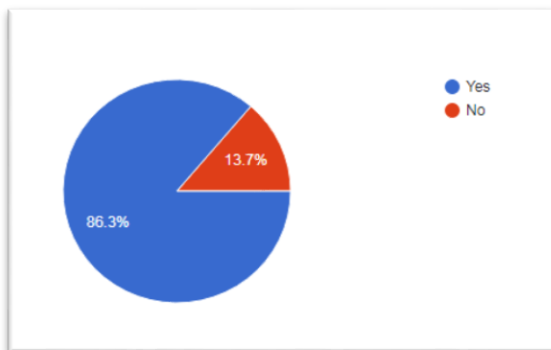
Chart 2: Gender

Analysis and interpretation:

From the above chart, we can interpret that majority of the respondents were female, making up 67.6% of the sample. While males constituted 32.4% of the sample.
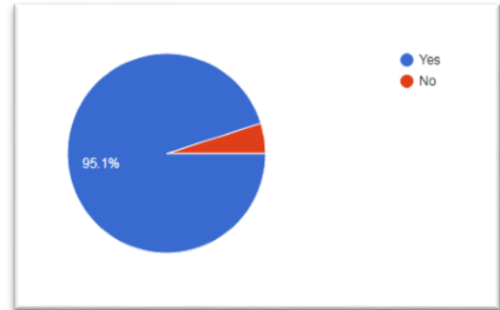
Chart 3: Percentage of the sample that enjoys using technology

Analysis and interpretation:

From the above figure, we can infer that 86% of the respondents from the sample are avid technology users, whereas 14% of the respondents from the sample were not in consensus with this idea.
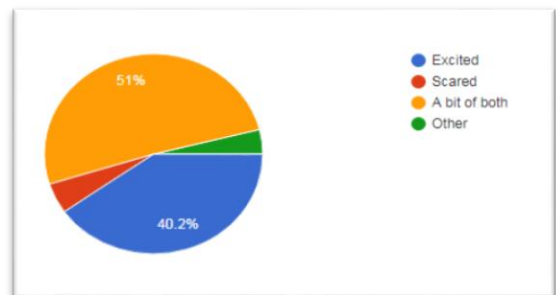
Chart 4: Level of awareness regarding artificial intelligence

Analysis and interpretation:

From the above figure, we can observe that 95% of the respondents from the sample were aware about AI, whereas 5% of the respondents were unsure about it.

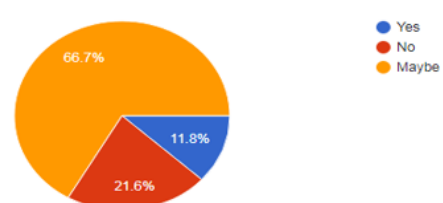*Chart 5: Opinion regarding having AI implemented into home/devices*

Analysis and interpretation:

Our findings indicate that majority of the sample (constituting 51%) would feel both excited and scared on having AI implemented into their homes or devices. Whereas, 40% of the respondents felt they would be excited, and not scared.

When asked about any other feelings apart from these, the respondents mentioned curiosity. According them it would cause interference in personal lives and interests, exposure, unsafe handling of data, misuse, safety and security threats, etc.

Chart 6: Will AI be dangerous to our society

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Analysis and interpretation:

Due to the limited understanding of AI among the general public, people have not yet formed a strong opinion regarding its positive or negative implications to the society. Hence, majority (i.e. 67%) of the respondents did not pick yes or no, but rather chose the option 'maybe' when asked this question. Whereas, 21% of the sample do not agree with this idea. Only the remaining 12% considered that AI would be dangerous to the society.
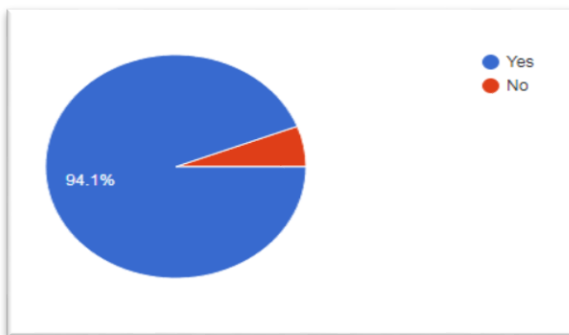
Chart 7: Will AI take over our jobs and decrease the job market
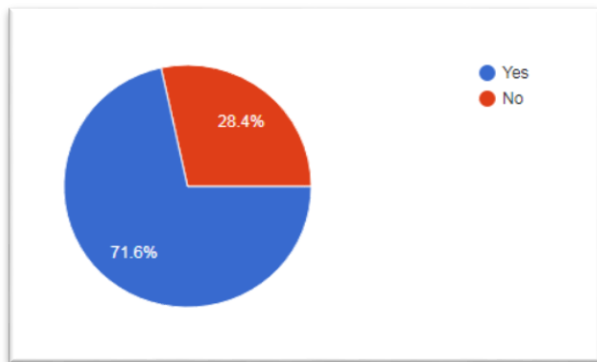
Analysis and interpretation:

A large majority of 72% of the sample size feel that automation through AI will bring about an increase in unemployment, while the rest 28% do not agree with this notion.

*Chart 8: Willingness to have some control over AI*

Analysis and interpretation:

A large portion of the sample size comprising of 94% would feel more comfortable if they possessed some degree of control over their Artificial Intelligence. Whereas, the remaining 6% chose the opposite response.

This highlights the fact that the people do not want AI to turn so powerful that it might end up controlling their lives instead of the other way round.

Chart 9: Major challenges of AI
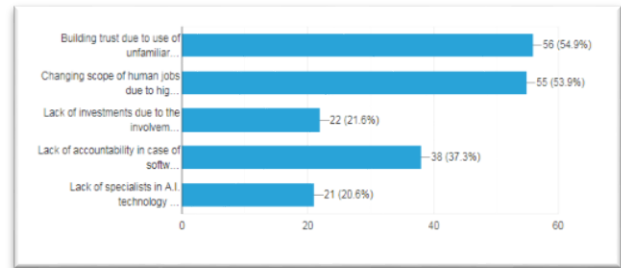
Analysis and interpretation:

Our findings indicate that 55% of the respondents chose the building of trust due to the use of unfamiliar technology to be a challenging aspect when it comes to AI. 54% consider the negatively changing scope of human jobs due to high automation to be a hindering factor in AI's growth. 37% of the people agreed with the notion that there is a lack of accountability in case of software malfunctions due to complex algorithms and limited human involvement. 22% of the sample feel that AI is unable to flourish because it involves huge funding, but the insufficient investments hamper that. Presently in the AI technology companies there is a dearth of specialists and experts which acts as a limiting factor to their growth, and 21% of the people also agree with this notion.
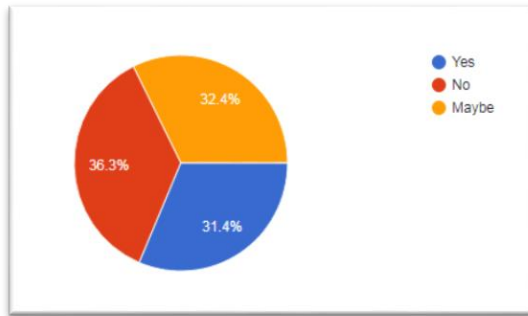
Chart 10: Utility of AI in various fields
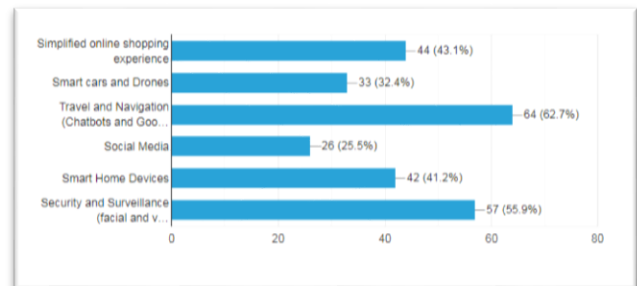
Analysis and interpretation:

63% and 55% of the sample respectively chose travel and navigation (chatbots and Google Maps), and security and surveillance (facial and voice recognition) as being the most significant fields where AI is proven to be most useful to them.

43% and 41% of the respondents chose simplified online experience and smart home devices respectively, as being few of the several benefits of AI.

The remaining 32% and 25% chose smart cars (driverless cars) and drones, along with social media as being AI's other significant positive impacts, respectively.

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Chart 11: should AI oriented machines be considered as entities that can perceive, feel and act

Analysis and interpretation:

Many people are debating that whether AI oriented machines and robots should be given the same rights as humans. Thus, when asked the same, 36% of the sample were seen not to be sharing this view as compared to the 31% who are in consensus with this idea. The remaining 32% are unsure about it.

Chart 12: Inclusion of AI in the Indian curriculum
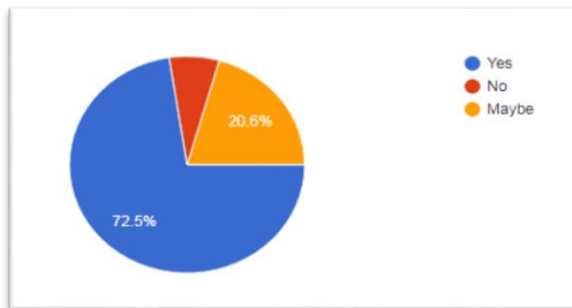
Analysis and interpretation:

In the current scenario, as people are still unfamiliar with AI's uses and benefits, when proposed if to overcome this, AI should be included in the Indian curriculum, a big majority of 72% strongly agreed in favour of this. While 20% had mixed feelings about this idea.

Chart 13: Personal involvement with AI oriented inventions
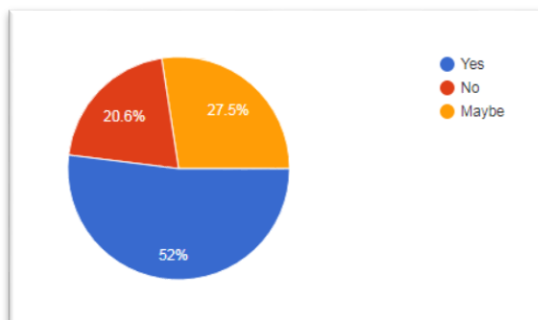
Analysis and interpretation:

AI oriented inventions such as automatic medical diagnosis, driverless cars and robots are gaining popularity and generating curiosity among people.

Out of our sample size, 52% wish to closely be involved with such inventions. The remaining 21% and 27% of the people did have as much as a strong desire regarding this.

12. Findings

- It is found that most of the respondents are females aged 21 – 25.
- It is found majority of the respondents were female, making up 67.6% of the sample.
- It can be inferred that 86% of the respondents from the sample are avid technology users.
- It is observed that 95% of the respondents from the sample were aware about AI.
- It is found that majority of the sample (constituting 51%) would feel both excited and scared on having AI implemented into their homes or devices.
- When asked about whether AI would be dangerous to the society, majority (i.e. 67%) of the respondents did not pick yes or no, but rather chose the option 'maybe'.
- A large majority of 72% of the sample size feel that automation through AI will bring about an increase in unemployment.
- Majority of the sample size comprising of 94% would feel more comfortable if they possessed some degree of control over their Artificial Intelligence.
- It is found that majority of the respondents (i.e., 55%) chose the building of trust due to the use of unfamiliar technology as the most prominent drawback of AI.
- Majority of the respondents feel Travel and Navigation (chatbots and Google Maps) as being the most significant field where AI is proven to be most useful to them.
- Majority of the respondents were against the idea of AI oriented machines being considered as entities that can perceive, feel and act
- When asked if AI should be included in the Indian Curriculum, majority of the respondents strongly agreed.
- It is found that majority of the sample size wish to closely be involved with AI oriented inventions.

13. Suggestions

- *Information:*
  Information on the risk associated with AI progress must be made accessible and understandable to a wide audience.
- *Forward Thinking:*
  Specialists' conferences should be held on AI safety and on accessing the consequences of AI, expert commissions should be formed, and research projects funded.
- *Education:*
  Negative income tax an unconditional basic income and subsidization of human work help in reducing the negative social impacts of increased automation; more research should

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have conducted towards finding additional options.

• *Responsible approach:*

Current legal frameworks need to updated to accommodate challenges posed by new technologies. A factual discourse should be framed to eliminate irrational prejudices and technophobia.

- Institutional measures should be developed for prevention of risks in AI development. More resources should be allocated towards the ethical development of future shaping technologies.
- AI manufacturers should be required to invest more in the safety and reliability of technologies and focus on bringing about transparency and non – manipulability.

14. Conclusion

In the current times AI has left its mark in various frontiers and holds great potential for the future as well. Even so there are numerous risks associated with it. These should be prevented by the individual researchers and developers.

If not cared for properly, technology can prove to be dangerous. Driverless cars could make our lives easier and save human lives, but complex computer algorithms can also cause the stock market to crash unexpectedly. Hence, while the risk from domain specific AIs appear limited in the near future, there are long term developments to take into consideration.

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