

An Empirical Study on AIML: Past, Present & Future Technology

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ABSTRACT

Artificial intelligence and machine learning, it has a long part and unimaginable future at present its evolution from where the fruits of AIML imagined in past are taking realistic form and boosting the confidence in its makers. Nowadays people are very well versed with technology and a very few are less versed but still they can use and understand the gazettes. 5G is already in the market and within the reach of people. Telecom and mobile companies are giving their best to the market. According to the author, this is the right time to discern the AIML past development and try to predict the future development of the same. In this research paper the author (s) are going to discern the development of AIML from the scratch till the present situation and tried to explore its future usages and challenges in an empirical study.

Keywords: AIML (Past, present and future), Recent applications, Artificial Intelligence, Machine Learning, Survey questionnaire

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I. Introduction

Artificial intelligence (AI), defined as “a system’s ability to interpret external data correctly, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation” [1]. In previous years, remarkable progress has been made in the field of artificial intelligence. ChatGPT, Chloe or self-driving cars are the best examples of the noteworthy progress. These examples shows that AI structures are now providing facilities that are believed to be intelligent and innovative. AI structures are unquestionably very beneficial. As the world becomes more evolved, it is required to strengthen our human resources and high-quality computer systems including applications that require intelligence.

Artificial Intelligence (AI) holds incalculable importance in the present scenario due to its ability to revolutionize industries, enhance efficiency, and focus on complex challenges involving capability to automate tasks, upgrade decision-making, deliver personalized experiences and lead to scientific advancements. It has the potential to reform societies and economies, making it a significant feature of the current scenario.

To implement artificial intelligence more effectively, the term machine learning is also

introduced in the domain of AI. Machine Learning has been defined as “automated methods for data analysis” or methods for automatic pattern recognition and prediction of future data [2].

A recent survey with over 8000 people by the technology giant Oracle found that 64% of people would trust a robot more than their manager and around 50% preferred a robot instead of their manager for advice [3]. A recent achievement of AIML in the form of ‘Chloe’ by cyberlife is also the example of AIML. This is the first android who passed the turing test. This android can perform billion of operations. Simultaneously, there are other development also going on in the field of AIML like computer-based AI program like ChatGPT etc. They are still in the development stage and continuously learning and evolving themselves in the human world. Therefore, we can finally see that man has created a machine that is faster and more intelligent than himself.

But this also gives rise to another face of AI that is the probability that a machine might hold intelligence scares numerous. Many consider that intelligence is something different, which is what distinguishes humans. But if intelligence can be mechanized, what is unique about humans and what sets it apart from the machine?

So, in this paper the author(s) want to introduce artificial intelligence and machine learning technology in detail along with the past, present and future developments. Further the author(s), also did some empirical studies on AIML with help of some questionnaire to aware the audience about the trends of AIML.

II. What is Artificial Intelligence and Machine Learning (AIML)

Artificial intelligence is the usual name of the technology for the advancement of machines, which are developed solely by artificial means which show activities like human beings, without taking benefit of any living creature.



Fig.1 [Source: HistoryofArtificialIntelligence.pdf]

McCulloch and Pitts introduced the ability to assign various functions to robots by utilizing artificial intelligence studies, artificial nerve cells and different science branches at the product development focus pointing to human behaviours [4].

The learning in machine learning points towards the method that makes a decision based on prior knowledge. Generally, the methods and algorithms are systematized such that their capability to perform a definite task improves with more information. For example, a machine learning model should produce more precise predictions as the amount of data increases.

II.I Past of Artificial Intelligence

The concept of making impassive objects into intelligent beings by giving life a long time is captivating the mind of mankind. However, the field of artificial intelligence was not formally established until 1956. In 1956, a conference "Artificial Intelligence" was held for the first time in Hanover, New Hampshire, at Dartmouth College. Cognitive scientist Marvin Minsky at MIT and other scientists participating in the conference were quite optimistic about the future of artificial intelligence [4]. In 1950, mathematician Alan Turing came up with the "Turing Test," which is used even at present to test a machine's ability to display intelligent behaviour

corresponding to, or indistinguishable from, that of a human. Between 1965 and 1970, it could be called a dark period for artificial intelligence. The developments on artificial intelligence in this period are too few to be tested [4]. In the 1980s and 1990s, scientists build machine learning algorithms, like neural networks and decision trees, which permitted machines to absorb from data. In the 2000s, researchers began discovering deep learning techniques, which consist of training neural networks on large datasets to recognize patterns in images, speech, and text. In the past two decades, AI has made meaningful growth in areas such as computer vision, natural language processing, robotics, and game-playing algorithms. Even when the requirements of humans are already met with conventional methods, the usage of artificial intelligence has stretched to a much wider range thanks to additional reasonable software and equipment.

II.II Present and Future of AI

At present AI is cheering the fruits of the efforts made by many researchers and scientist to make it happen. The present situation of AI is like 'there is something that is still required'. Introduction of AIML in the academics is in engineering colleges have included AIML as a separate branch, it's a positive sign that AIML having its own identity and coming from the shadow of traditional computer science and information technology branch.

Many companies are developing computer-based AI programmes like Chat GPT etc. which are still in their initial stage and still learning from the people to upgrade. AI has made its way in various industries such as:

1. Health Care: AI has been used to diagnose diseases, predict epidemics, and personalized medicine.
2. Finance and Banking: AI is used to detect and prevent fraud, optimize portfolios, risk assessment, and credit score analysis.
3. Transportation and logistics: AI is used in autonomous vehicles for efficient routing and reducing traffic congestion.
4. Manufacturing: AI is used in predictive maintenance, quality inspection, and supply chain optimization.
5. Retail: AI is used in inventory management, personalized recommendations, and customer service.
6. Energy and utilities: AI is used in predictive maintenance of equipment, energy optimization, and outage prediction.
7. Education: AI is used in personalized learning, student retention, and grading assignments.

8. Marketing and advertising: AI is used in personalized marketing campaigns, customer segmentation, and analysis of advertising campaigns.

9. Customer service: AI is used in chatbots, virtual assistants, and voice recognition technology to resolve customer issues and improve experience.

10. Agriculture: AI is used in precision farming, crop monitoring, and predicting weather patterns. There are still some limitations but the future commences to be amazing. Many futuristic space explorations and other marine research projects could get help from AIML. These are some examples like:

1. Space exploration: AI-powered robots and spacecrafts can be sent to explore our solar system and discover new planets, moons, and asteroids.

2. Climate change: AI can help in monitoring the environment, identifying risks of natural disasters, and developing new ways to mitigate environmental impact.

3. Cybersecurity: AI can be used to identify and prevent advanced cyber-attacks, protect the integrity and confidentiality of data, and enhance digital privacy.

4. Sports: AI can play a significant role in improving player performance, predicting outcomes, and creating engaging fan experiences.

5. Entertainment: AI can be used in developing new forms of media, such as virtual reality and augmented reality experiences, and in personalized content recommendations.

6. Smart cities: AI can help in optimizing traffic flow, reducing energy consumption, improving public safety, and enhancing emergency response times.

7. Mental health: AI can be used to improve mental health treatment by analysing large datasets of patient information, identifying patterns and trends, and developing personalized treatment plans.

8. Finance and Investments: AI algorithms can help in trade processing, stock market trend analysis and prediction, portfolio management, and fraud detection.

9. Agriculture and farming: AI can be used in precision agriculture to optimize crop yields, reduce waste, and manage resources efficiently.

10. Autonomous robots and drones: AI can be used in developing autonomous robots and drones for a variety of purposes, such as package delivery, search and rescue, and indoor

III. Recent applications of AIML

In the present market scenario, each day tends to bring in another revolution in Artificial Intelligence (AI) and Machine Learning (ML) to the forefront.

Beyond their influence on countless industries, these profound changes in AI and ML are affecting our daily lives as well.

1. Glam Scout:

Makeup has been a part of women's lives for eras. It can enrich our natural beauty and make us sure of ourselves. However, doing flawless makeup is not simple. There are various factors which needs to be taken in account such as finding the right makeup tools and products and another is understanding their skin type. Here AI appears as a rescuer. Glam Scout- this app uses AI technology to scan your face and suggest makeup options based on your skin tone and features. The app runs a multi-category search through thousands of products from over 100 prestige and mass brands. Consumers can recreate makeup looks by snapping a photo, uploading a saved image, or selecting from today's trends in the app's Featured looks. After receiving cosmetic product matches, mobile shoppers can virtually try before they buy the product [5].

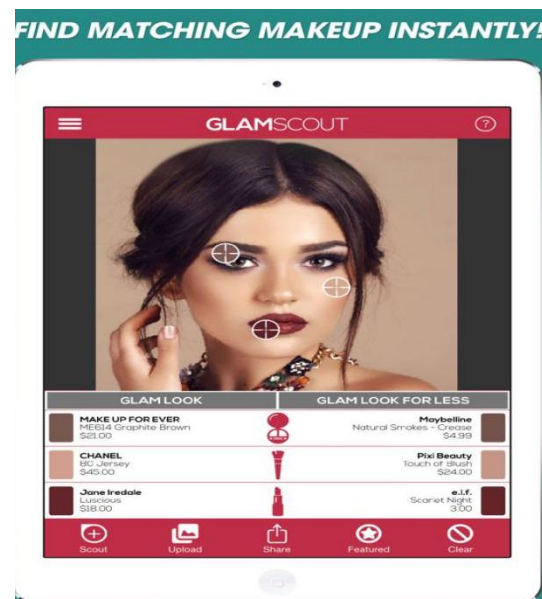


Fig.2[Source:

[https://tse4.mm.bing.net/th?id=OIP.4Nzm-HMELY2oXZ-](https://tse4.mm.bing.net/th?id=OIP.4Nzm-HMELY2oXZ-7msbx0AHaNK&pid=Api&P=0&h=180)

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2. FaceMe:

Security is an out-of-the-box security and access control solution. It permits identity verification, attendance management, and access control through facial recognition, with real-time monitoring and alerts. In addition, it can identify and track a person's movements using facial images or physical traits. Integrated with major VMS offerings, FaceMe Security enables easier and more effective smart security management [6].



Fig. 3 [Source: <https://www.cyberlink.com/faceme/solution/security/overview>]

3. Chloe

RT600 "Chloe" was the first CyberLife android perfected by Elijah Kamski, released in 2021 [7]. As the first private assistant built by CyberLife, she is invented to help human beings with daily chores such as doing housework and making arrangements. She is also the first android to clear the Turing test. By widely passing face-to-face tests in 2022, Chloe certified CyberLife's success.



Fig. 4 [Source: <https://vignette.wikia.nocookie.net/detroit-become-human/images/0/0f/Chlo%C3%A9Profile.jpg/revision/latest?cb=20180729152101&path-prefix=fr>]

4. Chatbots

These are intellectual digital assistants which may address user's simple and expectable queries. They offer various assistances via chatting and perform basic customer service operations. Chatbots[8] work 24/7 and hence they provide assistance even when offices are closed. Most corporations have already started employing chatbots on their sites especially on banking,

airlines, and e-commerce websites. Some examples of chatbot technology are virtual assistants like Amazon's Alexa, Google Assistant, and Messaging apps, like WeChat and Facebook messenger. These days, chatbots are becoming more complicated and advanced features like taking customer's complaint, performing transactions by taking customer's input, even alerting real human supported the query posted. Chatbots are becoming

context-aware and may engage end-users supported by the context set during the converse.



Fig. 5 [Source: https://tse2.mm.bing.net/th?id=OIP.PED6kye19AsaIgdz_nexdQHaEK&pid=Api&P=0&h=180]

5. Autonomous Driving and Self-driving Cars

AI has gathered fame for bringing self-driving cars to the world for all good reasons. This technology brings in machine learning algorithms, computer vision, and sensor fusion techniques to recognize the environment surrounding a vehicle, make real-time decisions, and manage the car in the overall driving spectrum. Autonomous vehicles are pacing up to redefine transportation, enhance road safety, mitigate accidents, and improve traffic flow [9].



Fig. 6 [Source: <https://marvel-b1-cdn.bc0a.com/f00000000270502/s19538.pcdn.co/wp-content/uploads/2023/06/Self-driving-cars-1000x500.png>]

6. Text to image generation using AI:

This is the latest example of using AI to enhance creativity and imagination, you have to just imagine and put your imagination in text AI will convert your imagination into real image that can be seen on the screen and you can download or share it on social platforms.

Here are some examples of websites who are doing this miracle [10], this is how AI understands the human language its Natural Language Processing, the use of algorithms to

determine properties of natural, human language so that computers can understand what humans have written or said. NLP includes teaching computer systems how to extract data from bodies of written text, translate from one language to another, and recognize printed or handwritten words.

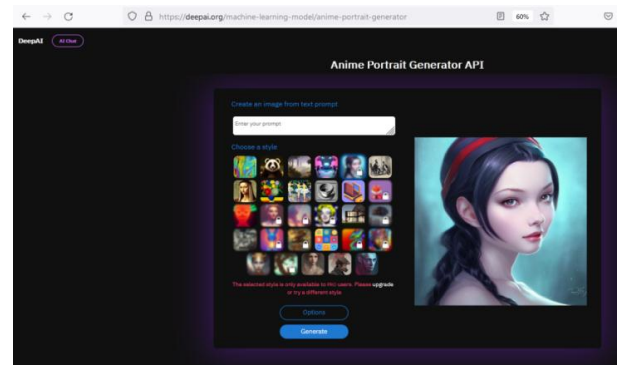


Fig.7 [Source: <https://deepai.org/machine-learning-model/anime-portrait-generator>]

Canva's AI image generator[11] means the perfect image is always at your fingertips—even if it doesn't exist yet. Create images that visualize a product or idea, sketch out a creative concept, or push the limits of what's possible. Simply type your text prompt: “A panda riding a bike through a city with depth of field.” Watch your words and phrases transform into beautiful images you can use on any of your creative projects, like presentations or social media posts. Text to Image is available to free users who can access up to 50 lifetime queries. With a Canva Pro, Teams, EDU, or NFP subscription, access up to 500 queries per user per month.

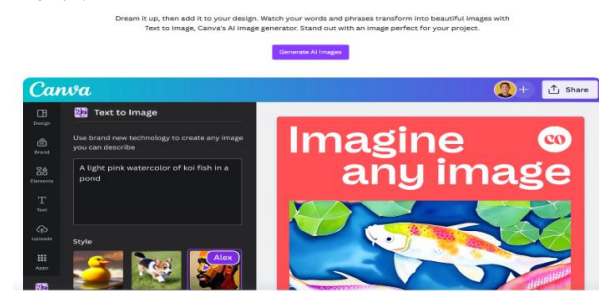


Fig.8 [Source: <https://www.canva.com/ai-image-generator/>]

7.VEED.IO -Get AI generated images from text online

Automatically generate images from text online using VEED's [12] powerful AI Image Generator! VEED uses artificial intelligence software to produce images from text straight from your browser. Just type a text prompt, click on 'Generate Image', and watch images appear on your screen based on your text!

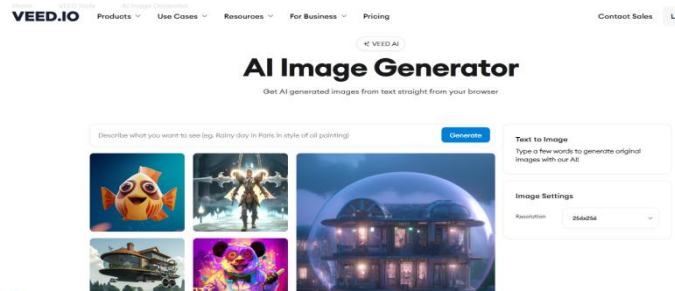


Fig.9 [Source: <https://www.veed.io/tools/ai-image-generator>]

8. Text into videos:

AI has gone one step more advanced in processing text to images its processing text into videos [13-14].

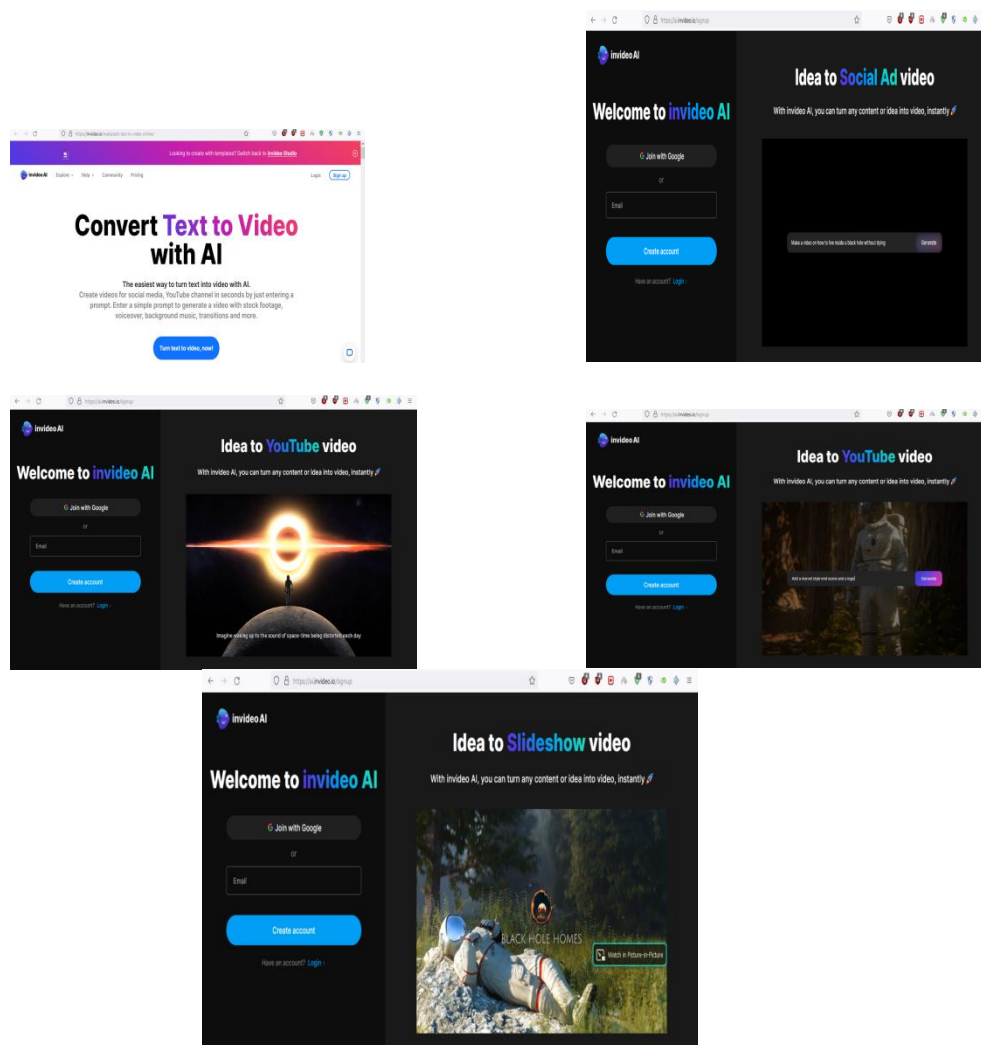


Fig.10 [Source: <https://invideo.io/make/add-text-to-video-online/>]

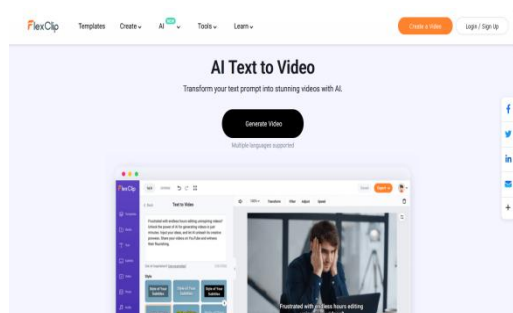


Fig.11 [Source: <https://www.flexclip.com/tools/ai-text-to-video/>]

AI text to Video has no limits, you're thinking creativity and imagination is the limitation. Just think and turn into the text and hit generate AI will do the rest. There are uncountable areas where this can be implemented and use to generate sales, attract people, make an effective advertisement anything that you can think it will be done.

Here are some areas for reference where it can be used as-

- Animal & Pet
- Anniversary
- Art & Culture
- Automotive
- Baby
- Back To School
- Bakery
- Birthday
- Black Friday
- Business & Services
- Cafe
- Charity
- Christmas
- Clothing
- Community
- Company Introduction
- Corporate
- Courses
- Creative
- Easter
- Ecommerce
- Education & Training
- Environment Protection
- Topic Explainer
- Facebook
- Facebook Ad
- Family
- Farewell
- Fashion & Beauty
- Father's Day
- Meme
- Gaming
- Graduation
- Gym
- Hair Salon
- Halloween
- Health & Wellness
- Holiday & Event
- Tutorial
- Instagram Ad
- Instagram Reels
- Instagram Story
- Intro & Outro
- Kids
- Lifestyle
- LinkedIn
- Logo Reveal
- Marketing
- Memorial
- Mother's Day
- Movie
- Music
- Nature
- New Year
- News & Media
- Nonprofit
- Onboarding & Offboarding
- Personal
- Photography
- Portfolio
- Product
- Promo & Sales
- Quotes
- Real Estate
- Religion
- Report
- Restaurant & Food
- Resume
- Review
- School Introduction
- Skincare
- Slideshow
- Social Media
- Sports & Fitness
- Store
- Student & Teacher
- Technology
- Testimonial
- Thanksgiving

- TikTok
- Trailer
- Travel
- Twitter
- Twitter Ad
- Valentine's Day
- Vlog
- Webinar
- Wedding
- YouTube

IV. Survey on AIML

A survey also done on AIML using some questionnaire for seeking awareness among people. The survey was designed and targeted for the individuals engaged in various sectors like students, employed in government sectors, private sectors and self-employed. AIML is the one of the latest technologies which is being used in many industries such as healthcare, electronics, marketing and advertising etc. As the paper was targeted towards realistic implementation of AIML and knowing the awareness about AIML among public. A series of questions were designed to know the awareness about AIML technology and the same was plotted for better reach so that the respondents can easily fill them.

IV.I. Survey Result, Questionnaire, Data Interpretation and Analysis

1. The survey result (fig.12) shows the maximum respondents are students with 83%, 10% employed in private sector, 6% employed in government sector and 1% are self-employed. As per the survey result the maximum number are of students these are the population who will be using the most AI based application in future and in present scenario. They are the ones who are very active on social platforms and in future they will be the end users. Therefore, their opinion matters a lot. Rest of the population is also important but they are not the futuristic end users and may be less active on social media and maybe they are less influenced by the AI things. This survey could be the ground breaking landmark survey as the respondents are maximum young generation and students.

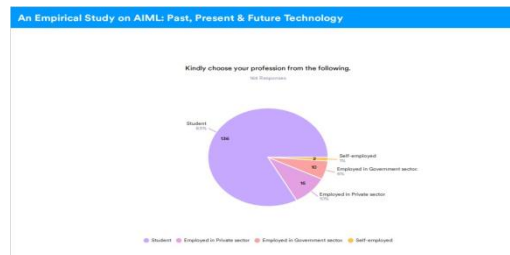


Fig.12

2. Fig. 13 shows that 49% are positive about Artificial Intelligence will be a great help to the mankind, 32% believe AI is still in the developing phase so, it is early to say anything, 10% say it is complicated and let future be the deciding factor, 9% said depending upon the machines, it fears them. young generation near about 50% of the respondent population are having positive belief that AI would be helpful in near future to mankind, as we have seen the examples of text to image and text to video using AI. Its unbelievably incredible. The young generation has the understanding that it's in the developmental phase and need some time to learn and give the accurate and precise result. Other 10% of the respondent population may be correct as the technology is learning from humans and all around the world there are different people with different cultures and believes technology could be risky if it gets complicated. This fear of risk could be beneficial to the mankind as they can think to refine and concentrate on the safety points.

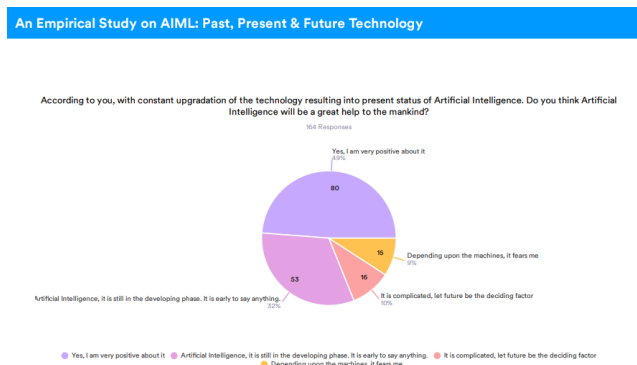


Fig.13

3. In Fig. 14, 19% individuals say AI technology will be great help in following sectors : Aerospace & Defense, Agriculture

& Animal Husbandry, Chemical & Pharmaceutical, Construction, Energy & Utilities, Entertainment, Finance, Healthcare, Hospitality, Insurance, Legal, Manufacturing, Publishing & Media, Science & Research, Technology, 12% believe AI technology will be great help only in Aerospace & Defense, 11% say AI technology will be great help only in Science & Research, 8% believe AI technology will be great help in Healthcare and 7% say AI technology will be great help in Agriculture & Animal Husbandry. As the respondents have pointed out the areas where AI application could be useful, maximum respondent are in favor of aerospace, defence, agriculture etc. These are the core developing areas where more research work is needed and definitely AI could be a great help. Furthermore, respondents have mixed responses about the areas but point to ponder is that they have covered almost all areas where AI application could help in future research and exploration.

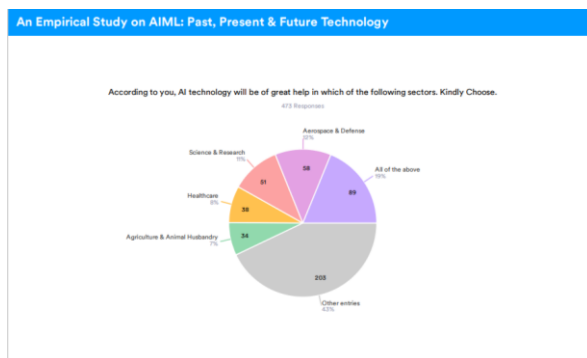


Fig. 14

4. Fig. 15 shows 61% humans think that many IT companies are working on AI technology so it will lead to rapid progress and economic growth in AI technology, 34% say involvement of many IT companies will offer both benefits and harms, 5% doubt it will cause duplication of efforts and rise to ethical concerns. Exploration, research and economic growth these are some prospects that is needed for growth and development of a nation. Every sector of the market is contributing to the growth and development. agriculture sector was considered as the base sector and it is but IT sector is growing rapidly and many growths and development research technology is coming up in the market as

we have seen above in the research paper IT sector is becoming pioneer in new trends and this will definitely boost the economy. Technology is like double edged sword it has both side negative and positive as the AI is learning from all round the world and AI and users could take misuse of the same. The respondents have very clear understanding about the future benefits and harms of using technology and its growth aspects and its input to the economic development.

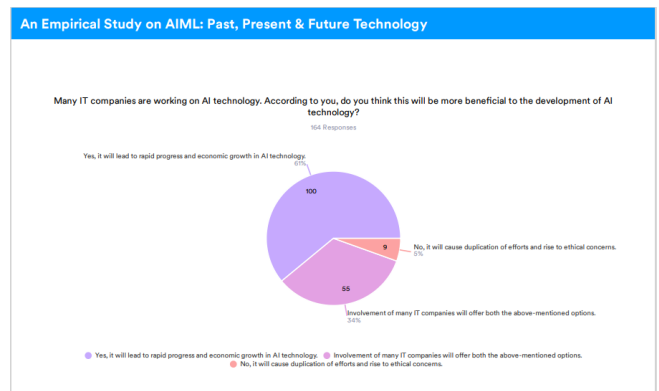


Fig. 15

5. Fig. 16 indicates that 40% people are aware with concepts of machine learning, such as reinforcement learning, neural nets, deep learning, clustering etc. 51% have heard the terms, but don't really understand them and 9% are not at all aware about. This question is about the awareness about the technology details, as we know from the first question that respondent population contains maximum numbers of student population and from this question responses 40% are aware and 51% are having some knowledge about the technical words but do not understand properly, this could be due to the initial phase of AIML with the due course of the time people will get used to. This is encouraging that in the initial phase of AIML application development respondent population is techno savvy.

An Empirical Study on AIMA: Past, Present & Future Technology

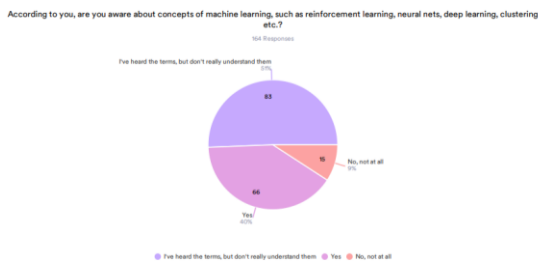


Fig.16

6. Fig. 17 displays that 45% humans believe having an AI implemented into home or devices will increase dependency in decision-making and humans could be more lazy and ignorant. 40% think it would be amazing to have smart home or smart devices, 8% say can't predict and 7% doubt the Control may be shifted to AI Technology. This question is about impact of using technology, like in older days when mobile phones were not so common people used to remember 10 to 15 landline numbers but as the technology upgrades and smartphones came into the picture nowadays very few people remember the phone numbers of friends and relatives. Similarly, from the respondent population 45% think that this will increase the dependency in decision making and this could lead us into laziness. This may be true in some cases but on the other side of the coin this could save our time and money. Many things in our home get smarter due to AI implement 40% of the respondent population support this, very less like 8% of the respondent can't say anything, they are into wait and watch condition and 7% thinks that the control may be shifted to AI technology. It cannot be ignored that some percentage control could be shifted, but this doubt creates the opportunity to think about and take necessary precautions so that this could never happen in near future.

An Empirical Study on AIMA: Past, Present & Future Technology

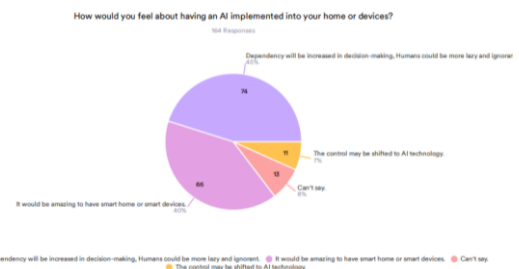


Fig.17

7. Fig. 18 indicates out of the available AI technology tools 35% are known to ChatGPT, 11% to Copy.ai, 9% to TensorFlow and bard, 7% to Scikit Learn. This is the question that reveals about the awareness of AI tools available in the market maximum percentage like 35% of population knows ChatGPT and may have used it, this AI tool have become very popular in very short span of time. People are amazed after using this AI tool and getting detailed answers for their questions. The next popular in the respondent population is Copy.ai with 11% TensorFlow and Brad with 9% and Scikit Learn with 7%. there are many AI tools in the market and many of them getting popular with time. ChatGPT has different domain, VEED.IO has different domain, like one is responding the user in text from and other one is responding the user in text to image or text to video form. The popularity and awareness of the AI tools will increase with their usage and demand.

An Empirical Study on AIMA: Past, Present & Future Technology

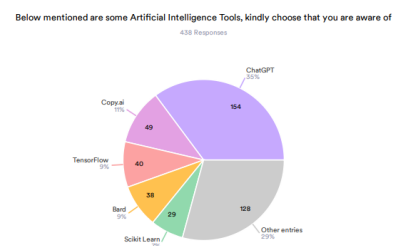


Fig. 18

8. Fig. 19 shows 70% people know the main function of virtual try-on tools using AI in

the cosmetics industry. In this question respondents are very well aware about the cosmetic industry and its products 70% of the population knows virtual try on using technology. This is a clear signal for the cosmetic industry that by using AI tools they can increase the demand and supply in the market. This time with the help of AI tools with specific demand and supply according to user's skin type and skin tone as suggested by AI tools. Normally people just buy the product as suggested by friends, advertisement or suggestion made by sales person they do not know the exact type of product needed for their skin type, but with the help of AI tools people will get what they actually needed. AI tool will give a big boost in the cosmetic industry.

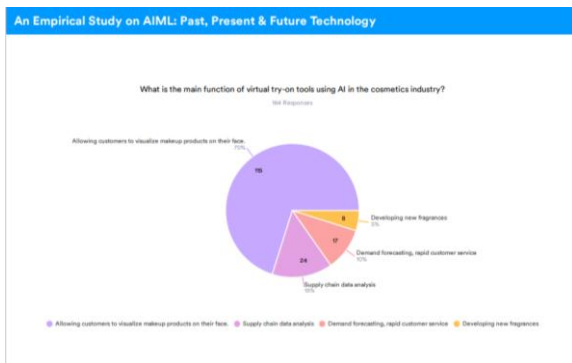


Fig. 19

- Fig. 20 shows 60% humans consider an AI makes a decision for them is sometimes helpful but not always, 23% appreciated, it's a great help, 13% think it's a breach in decision-making process and 4% can't predict. This question reveals that people are aware about the two sides of the coin, 60% are aware that decisions made by AI tools are helpful but now always, we cannot blindly trust the decision made by AI tool. Like the other side of the coin, 23% of respondent population thinks that it will be a great help, 13% thinks that it's a breach in the decision-making process as humans do. Normally, human beings take their decisions based on their past experiences and by taking help of their friends and relatives this process sometimes helps and sometimes not. 4% of the respondent population not in a mood to say anything.

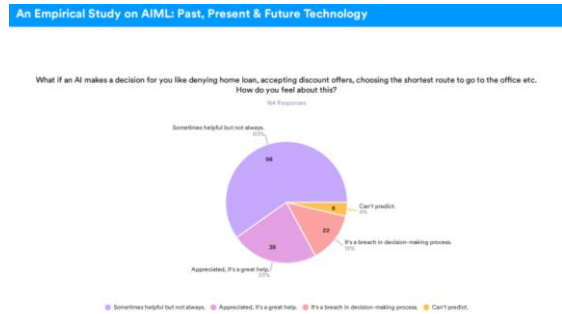


Fig. 20

- 'An AI that is as smart and versatile as a human in near future', fig. 21 points on this statement 43% people think it could be harmful of helpful depending on who creates it, and the reason for its creation, 18% said we are on the right track of developing AI Technology, 12% doubt it might destroy us all, as it is constantly learning from the world, 11% think it is under process, but at a greater pace and 9% say it will be a great benefit to the human race. Developing AI technology and tools is a ambitious mission of mankind and it is in constant development and upgradation from last many decades and it is constantly evolving better and better with time. 43% of the respondent population thinks that AI will be smart and versatile in near future, and may be harmful. This fear of dependency will create the opportunity to take safeguard steps while developing the AI tools, this fear will be a great help to the mankind in many aspects. 18% of the population are optimistic and think that we are on the right track. 12% doubt that it will destroy us all, 11% thinks that it is still in progress and development 9% of the respondent are saying that it will be benefit to human race. This question gives the mixed reactions of the people about the technology, some are optimistic, some are having their doubt and fear, some are thinking about the upcoming benefits for the human race. Every coin has two sides and so as technology its usage will define the fate of it.

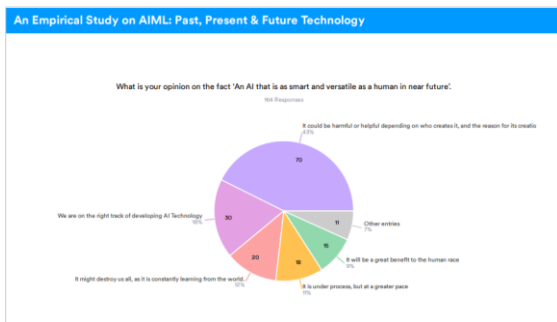


Fig. 21

11. Fig. 22 indicates 51% humans are certain in near future AI technology will replace the human and create unemployment, 24% think it can be potential for job creation, 18% can't predict and 7% suggest it will have unnoticeable impact to employment. In the response of the above question 51% of the population think that it will replace the humans and create unemployment, with every new technology this fear is associated and cannot be ignored. If we look in the past, hand written process was replaced by type writer, and type writer were replaced by computer and so on. There could be many examples where we feel replaced, change is constant only those will be replaced who do not upgrade with technology and time. New technology will always create new job opportunity people have to upgrade with technology to get this opportunity and 24% of the respondent population agree with this. 18% of the respondent population not in a position to say anything and 7% suggest that this will have noticeable impact in employment generation.

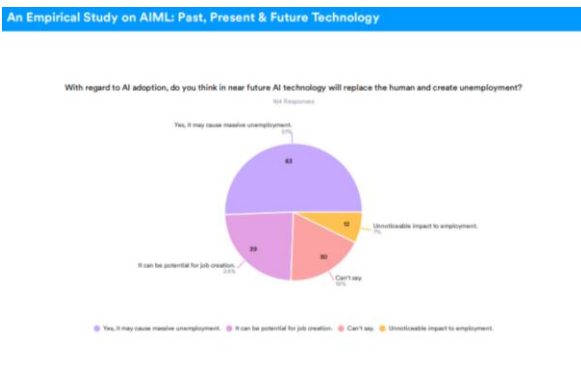


Fig. 22

12. In Fig. 23 79% individuals know AI effect on navigation and traffic management

systems which is enhancing real-time traffic predictions and route optimization. In response to this question about traffic management systems 79% of the respondent population have positive feedback that AI tools will enhance real time traffic prediction and help the human race. Nowadays, people are using google maps to get the traffic details and route direction and this system has constantly improved with the time and people are getting used to it. With the AI tools in the traffic management will create amazing results and the population and motor vehicles are increasing day by day and traffic control and route optimization is becoming a great problem.

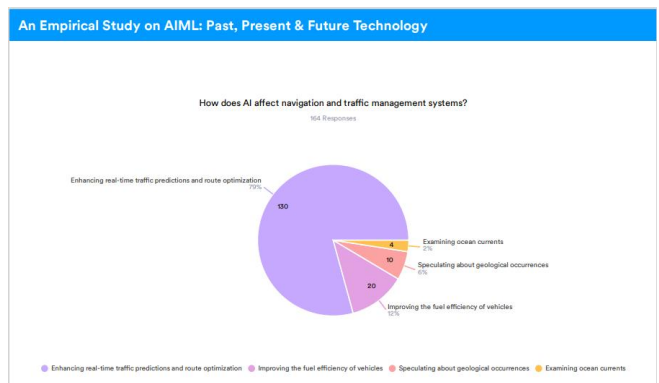


Fig. 23

13. Fig. 24 directs 65% people are aware of the term NLP (Natural Language Processing) which is been used in AI technology. In response to the awareness of NLP - natural language processing, the code of the AI tools 65% of the population is aware about it. NLP is the process by which AI system will understand the human language, it's a good sign that respondent population is having the awareness and this will increase the employment opportunity.

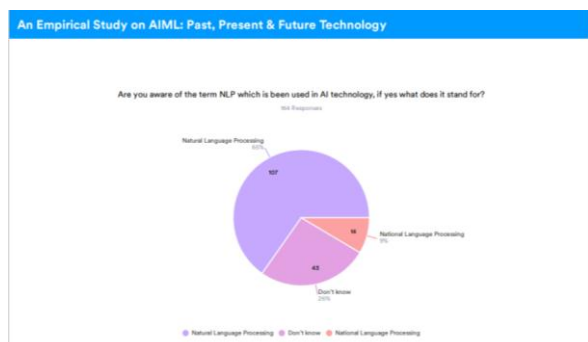


Fig. 24

14. Fig. 25 shows 51% humans are aware by the term Turing test and know Chloe was the robot to pass turing test in 2021. In response to the Turing test 51% of the respondent population is aware about it. Turing test is to test about a robot that is how much close to the human reactions and responses. Chloe was to first to pass this test, this is a great achievement in history of the development of the of AI robot.

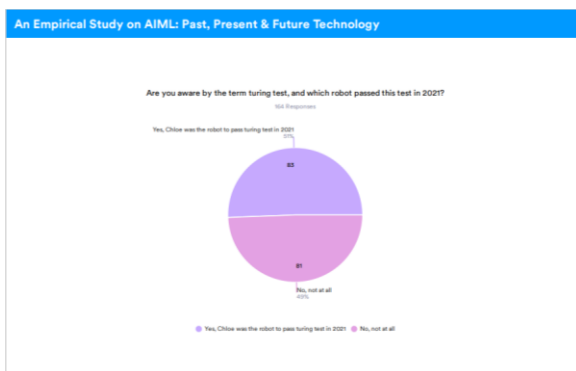


Fig. 25

15. Fig. 26 points 67% people are conscious of AI aid in the development of human-like robots that is enabling robots to mimic human-like movements and interactions. In response to the question of development of human like robots 67% of the respondent population are conscious about this and having some fear about it. Development of the technology has its own pros and cons and cannot be ignored; this fear will lead into the taking the steps to safeguard the technology for the upcoming future.

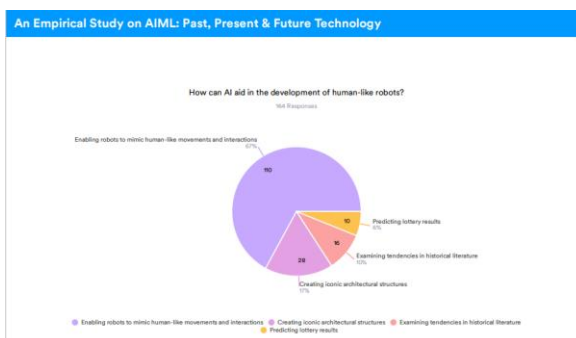


Fig. 26

16. Fig. 27 displays 50% individuals know AI-powered chatbots are mostly utilized for offering customer support and troubleshooting for robotic systems. In response to this question about the chatbots

to help customer supports, nowadays chatbots are widely used to support customers to solve their query and people are avoiding the toll-free numbers due to fraud. 50% of the respondent populations are aware about chatbots. These AI powered chatbots are still in the developing phase by the time they will improve to deliver better performance.

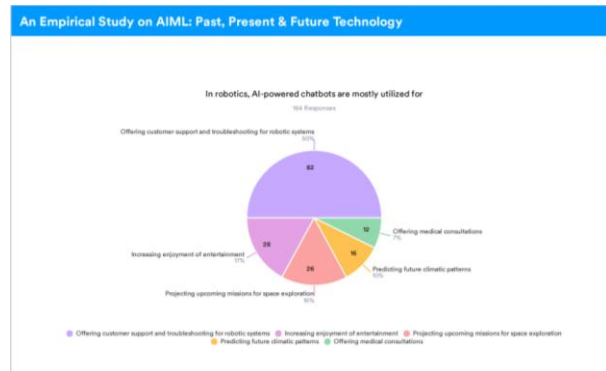


Fig. 27

17. Fig 28 shows 77% humans are aware about AI can contribute to the electronics industry by improving semiconductor yield and manufacturing processes in response to the above question respondent population of 77% are aware about the contribution of the AI based tool in the electronics industry. In electronics industry there is a requirement of accurate and precise designing and in that this AI technology can give a better support to boost the electronic industry. Electronic industry becoming in huge demand and electronic products are constantly improving to save the size and cost, development like SoC-system on chip and other things AI technology will be certainly a great help.

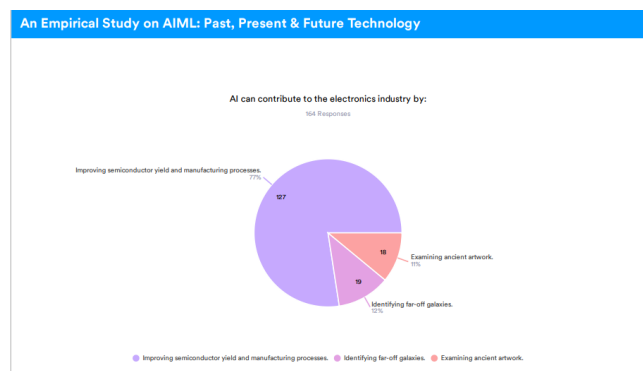


Fig. 28

V. Conclusion

To conclude the research, the respondent population is aware about the development of AI tools and they are started using the same. People are also aware that the technology is like double edged sword and necessary precaution is needed to develop the same. By using AI technology there could be boost in the economy as AI is helping many sectors like cosmetic industry, electronic industry and many more. By looking the respondent responses, the authors are confident that AI technology will give amazing result in near future and create job opportunity. This research paper is focused on the awareness of AI tools and its application and describing the past, present and future development of AI technology. There is an ample scope to research further in AI technology, the authors will try to explore more on the same in near future.

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