

Learn about 'Artificial Intelligence' – A Study Based on Facts and Figures

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Abstract

Artificial Intelligence has several applications in today's society. It is becoming an essential tool for today's time period because it can solve or reduce complex problems in an efficient manner. Technology can make our daily life more comfortable and faster. In recent era, issues involved in health care, finance, governance etc. have become hot-cake. So, in those fields artificial intelligence can be given more focus. In this article, focus has been given on those fields which are complex and are also very useful for the people.

Keywords: Deep Blue, Robotic, GPT-3, Biometrics, Machine learning.

Overview

Artificial Intelligence is a formulation of human brain which acts like human. Artificial intelligence is a technology which enables various functions like the ability to see, analyze several data, understand and translate different things and many more. In modern computer system artificial intelligence is the back bone of innovation. Artificial intelligence not only the subject of computer science, it encompasses many disciplines including accounts, statistics, audit, engineering even like health industry. Here's a detail has been discussed to highlight how artificial intelligence evolved in past six decades –

In 1956 – John Macarthy coined the term 'Artificial Intelligence' and the first AI conference.

In 1997 – 'Deep Blue' a super computer was designed and a program likes chess, it defeated the world champion in math.

In 2002 – A robotic vacuum cleaner was making and it's successfully commercialized.

2005 – 2009 – Several innovations have been made like Speech Recognition, Robotic Process Automation (RPA) and also dancing robot.

2020 – In the field of medical terminology several algorithms have been released. This algorithm can predict the RNA sequence of the virus in only 27 seconds, which is 120 times faster than other methods.

Literature Review

As per Shabbir and Anwar (2015) artificial intelligence can develop the human ability over a time period. Recent research shows that artificial intelligence tool can increase planning, learning, thinking and action making ability. In the near future, artificial intelligence can be the problem solving machinery of human error.

Verma (2018) observed that artificial intelligence replaces or enhances human capabilities in many areas. In the last two decades artificial intelligence perform well in the field of manufacturing, education and many other fields. This paper gives an overview of educational research with the use of artificial intelligence.

Rupesh and Choudaiah (2019) explained that several artificial intelligence devices act a major role to improve the environment and also digitalization. Artificial intelligence tool can help planning, learning and action taking ability on machine learning, deep learning and also predictive analysis.

Mohammad (2020) revealed that artificial intelligence is a multiple concept, such as data transmission, data analyzing, data creation and also computing. Artificial intelligence also applies in many sectors like healthcare, business organization etc. artificial intelligence encounter in multiple problem and possible for the multiple answer.

Paliwal and others (2021) highlighted that artificial intelligence and machine learning take a big roll to an industrial revolution in 4.0 industries. Last few years it has been observed that manufacturing industry and economic industry have developed significantly through artificial intelligence. This article provides some data on entrepreneurial activity on the basis of artificial intelligence.

OBJECTIVES: 'Artificial Intelligence' (AI) has entered our daily lives like never before and we are yet to unravel many other ways in which it could flourish. There are several objectives that have been discussed in this article, such as –

- 1) To analyze the automation process of 'Artificial Intelligence' from past to present.
- 2) To analyze the potential benefits of 'Artificial Intelligence'
- 3) To analyze the possible application of 'Artificial Intelligence'.

Methodology

Artificial intelligence practically touched in every industry and an increasing number of organizations to join this queue. Owing to high demand of technology in organizations perspective machine learning has dramatically used in this process. This paper relies on secondary information that have been collected from several analysis paper, books, websites and articles etc.

Recent Developments in Artificial Intelligence –

- 1) AI in Healthcare: Artificial intelligence plays a vital role in personalized medicine. In the history of health industry patients were more dependent on artificial intelligence. In medical science artificial intelligence deeply concentrate on algorithm, surpassing human capabilities in diagnosing diseases from CT scan, MRI's and X-ray.
- 2) AI in GPT-3: The cutting-edge language model GPT-3 (Generative Pre-trained Transformer 3) was created by open AI, a machine learning and artificial intelligence research group. Most sophisticated AI language i.e. 175 billion parameter has revolutionized the creative space.
- 3) AI assisted creativity: AI has brought about significant changes in creativity world. Now-a-days AI assisted creativity is rapidly expanding and also offering immense potential for transforming the creative landscape. AI has helped a lot in mimicked the styles of great pointers and informed creative decisions in film making.
- 4) Virtual Agents: Virtual agents or chat bots is a software program that initially assisted to the customer service functions. Virtual agents are often used for initial customer interactions with call centers or click to chat features on websites.
- 5) Biometrics: Biometrics refers to the measurement or behavioral features used to identifying the individual in organizations. It was an advanced trait which is easily identifying the gap in a predictive basis. In most recent technology biometrics is an essential part of artificial intelligence.
- 6) AI in Audits and Accounts: In artificial intelligence, data analytics is the vital part which is used in auditing system. In case of large financial organization, data sets are huge. AI may evaluate those financial data in continuous basis. Data input and report generation are the initial part of audit program. In AI feature RPA (Robotics Process Automation) is to create revolution in audit program.
- 7) AI used in Machine Learning: Machine learning is another part of artificial intelligence. It may be used to examine vast volumes of data and spot patterns or trends. Machine learning may be used to spot possible risk or problems as well as to create prediction models.
- 8) AI in Reinforcement Learning: Reinforcement learning is a training method that enables the development of self-driving vehicles and other autonomous systems. In other face, reinforcement learning can manage the behavior of AI agents and help to performing the machine learning equations.

Data and Analysis**Table – 1: The Artificial Intelligence software markets global annual revenue**

YEAR	REVENUE (Dollar in Billion)	% of Increase/Decrease
2018	10.10	-
2019	14.69	45.45
2020	22.59	53.78
2021	34.87	54.36
2022	51.27	47.03
2023 (Assumed)	70.94	38.36
2024 (Projected)	94.41	33.08
2025 (Projected)	126.00	33.46

Source: www.explodingtopics.com

From the above table, it is observed that the artificial intelligence market's global annual value has increased year by year. From the year 2018 to 2025 (projected) the annual revenues have been increased by 45.45, 53.78, 54.36, 47.03, 38.36, 33.08 and 33.46 per cent respectively.

Table – 2: Global revenue from the NLP market from 2017-2022

YEAR	REVENUE (\$ Billion)	% of INCREASE/DECREASE
2017	3.18	-
2018	5.07	59.43
2019	8.21	61.93
2020	12.4	51.03
2021	17.58	41.77
2022	24	36.52

Source: www.explodingtopics.com

From the above table, it is seen that global revenue from the National Language Program (NLP) is significantly grew up from the year 2017 to 2022. The highest increase has been observed in 2018 compared to 2017, the percentage of increase was 61.93 from 2017 to 2018 and 2019 to 2020 the percentage of increase was more than 50.

AI Facts and Figures –

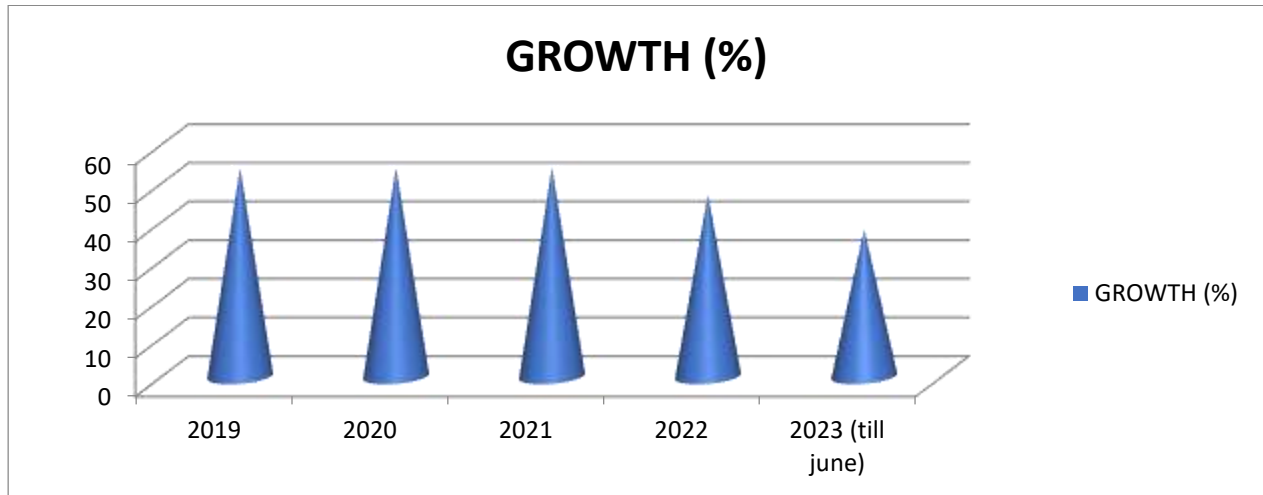
- ✓ By 2025, revenue from the artificial intelligence software market worldwide is expected to reach 126 billion dollars.
- ✓ According to Gartner, 37% of organizations have implemented AI in some form.
- ✓ Over the past four years, it is expected that more than 270% job has been created according to Gartner.
- ✓ As per Servion Global Solutions 95% of customer interactions will be powered by AI by 2025.
- ✓ After 2020, AI software markets expected to grow approx. 50% year on year according to Statista report.
- ✓ The Popular E-mail providers G-mail has announced that, they have managed to reach a filtration process of approx. 99%.
- ✓ According to several report, 80% of bank recognize the benefits that AI can provide. It has been observed that artificial intelligence can better predict and assess loan risks.
- ✓ 35% of companies are using AI and 42% of companies are exploring AI for its implementation in the future as per Techjury article.
- ✓ According to Techjury, in recent era 91.5% of leading businesses invest in AI.
- ✓ Applicability of AI can grow customer satisfaction by 25% in 2023.
- ✓ In 2022 the amount of private investment in AI was 18 times greater than it was in 2013.

- ✓ An AI index analysis of the legislative records of 127 countries shows that the number of bills containing AI that were passed into law grew from just 1 in 2016 to 37 in 2022.

Table – 3: Year over year growth

YEAR	GROWTH (%)
2019	54
2020	54
2021	54
2022	47
2023 (till june)	38

Source: www.explodingtopics.com



Source: Graph calculated by the researcher

Artificial intelligence is one of the important segments in business world. Year by year the demand of artificial intelligence has been increased. The picture show that in Table no. 3, from the year 2019 to 2023 the growth rate has been significantly valuable.

Table – 4: Use case in Artificial Intelligence

USE CASE	2020 (%)	2021 (%)	CHANGE (%)
Generating customer insight/intelligence	37	50	13
Detecting fraud	27	46	19
Acquiring new customer	26	34	8
Increasing customer loyalty	20	40	20
Building brand awareness	14	31	17

Source: www.explodingtopics.com

From the above table some important sectors of artificial intelligence have been identified for future growth. The table shows that how the percentage changes form the year 2020 to 2021 in some particular cases. In case of generating customer insights feedback 13% cases have been increased from the year 2020 to 2021. In case of detecting fraud the parameter were significantly increased i.e. 19% more than from previous year. 8% new customer has been acquiring the AI. In case of customer loyalty and building brand awareness the improvement is also significant. So, in a single sentence it can be claimed that artificial intelligence can make the world to stand in its own feet.

Misuse of Artificial Intelligence:

AI is currently one of the hottest buzzwords in technology and with good reason. The past few years have seen different innovations and advancements that have previously been solely in the realm of science fiction slowly transformed into reality.

- Since 2012, the numbers of incidents and controversies have been grown up by 26 times.
- Some notable incidents in 2022 included a deep fake video of Ukrainian President Zelenskyy surrendering in front of Russia.
- U.S. prisons using call monitoring technology on their inmates.
- Since 2021, Global AI investment decreases 26.7% which was \$ 91.9 billion dollar in 2022.

Table – 5: Share of employment and Risk of Job Automation

INDUSTRY	SHARE OF EMPLOYMENT (%)	RISK OF JOB AUTOMATION (%)
Wholesale and retail industry	14.8	44
Manufacturing	7.6	46.4
Transportation and storage	4.9	56.4
Administrative and Support service	8.4	37.4
Professional, scientific and technique	8.8	25.6
Human health and social work	12.4	17
Financial and insurance	3.2	32.2
Education	8.7	8.5

Source: www.explodingtopics.com

Conclusion

In 21st century, Artificial Intelligence enables people to rethink how the integrated information and data analysis have improved the decision making process. Day by day humans are more dependent on technology early to morning from late night to bed i.e., all the time, without technology people can't go through on a single step. Artificial intelligence is the back bone of technology. Most people are not very familiar with the term artificial intelligence (AI) but they are familiar with the term technology. Despite its lack of familiarity AI is transforming every walk of life. AI already stepped in the world of society, the economy and the governance. In this paper, it has been discussed the novel application of AI in finance, audit, health care; data analysis algorithm etc. In recent day cyber security is an important concern on behalf of daily activities of people. AI can help improve cyber security by continuously monitoring and analyzing network traffic. Not only cyber security, AI can eliminate or reduce human errors in analytics or data processing. AI can process more information and discovering relationship in data that a human may miss. Machine learning is one of the parts of AI, which is 'always on' and continuously working on its assigned task. In recent days people suffer from various diseases and also they suffer from various chronic diseases. In health care industry, it is used in predictive modeling and worked in human genome.

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