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AI Past, Present hype and Future Impact in Business

Short History

John McCarthy first coined the term Artificial Intelligence in 1956 at the Dartmouth conference, the event regarded as the birthplace of AI.

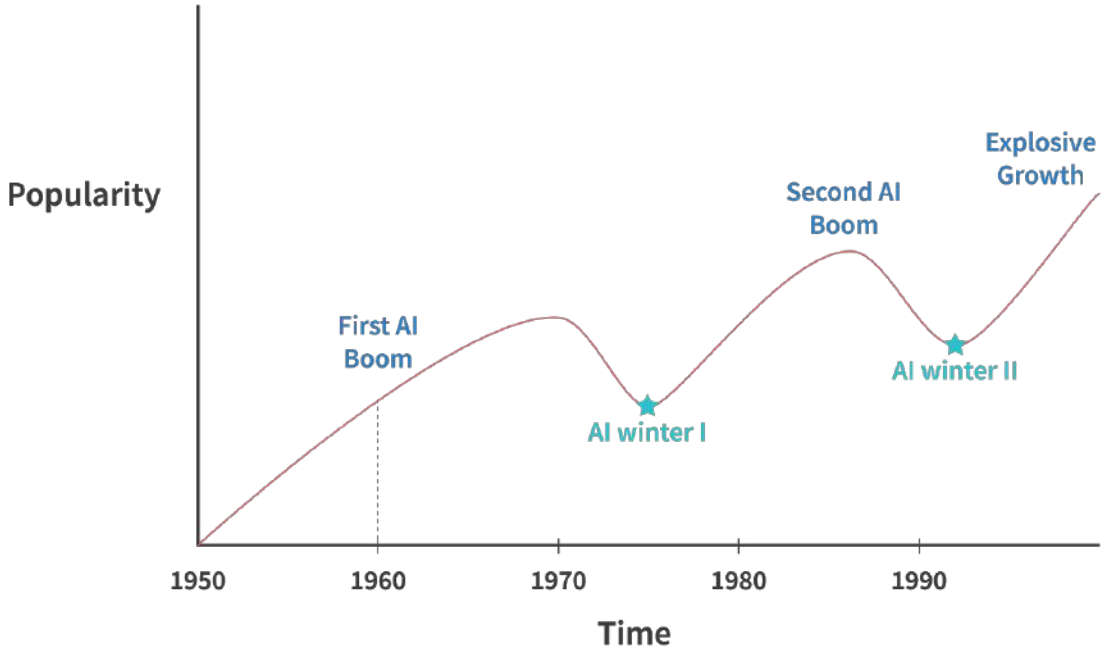

Figure : Short history of AI

AI has gone through a long history of being the next big thing with multiple ups and downs. With the initial prototypes of AI for reasoning and later with the appearance of expert systems capable of making decisions, AI continued to grow at a rapid pace in the 1950s and '60s. But as a result of exaggerated hype about AI, imaginary promises by developers, unnaturally high expectations

from end-users, and extensive promotion in the media, the public interest as well the funding in AI plummeted, inviting two AI winters. But eventually, with the advent of new technologies and capabilities that were capable of beating humans in different competitions and benchmarks, AI is now seeing explosive growth.

Following this, various trending AI technologies have been developed, like **AlphaGo, Jeopardy,** highly responsive chatbots. **AlphaGo,** designed by Google Deepmind engineers, has new algorithms and techniques that can challenge professional human GO players and even the world Go champion. IBM Watson computer outplayed two champions in Jeopardy, a popular TV show with quizzes and puzzles. Samuel's checker playing program was even able to beat one of America's best players of the time. With all these breakthroughs in game-playing and problem solving, more and more AI systems are coming into the limelight.

The Current State of AI in Business

In a survey conducted by McKinsey Global Institute, 50% of the respondents reported that their companies have been using AI in at least one business function. Among that 50%, some companies were capturing value from AI at the enterprise level, and many were generating revenue and reducing costs at the function level. Furthermore, 22% percent of respondents reported that more than 5% of their organization's enterprise-wide EBIT in 2019 was attributable to their use of AI, and 48% reported less than 5%. You can read the detailed report on the survey by McKinsey here.

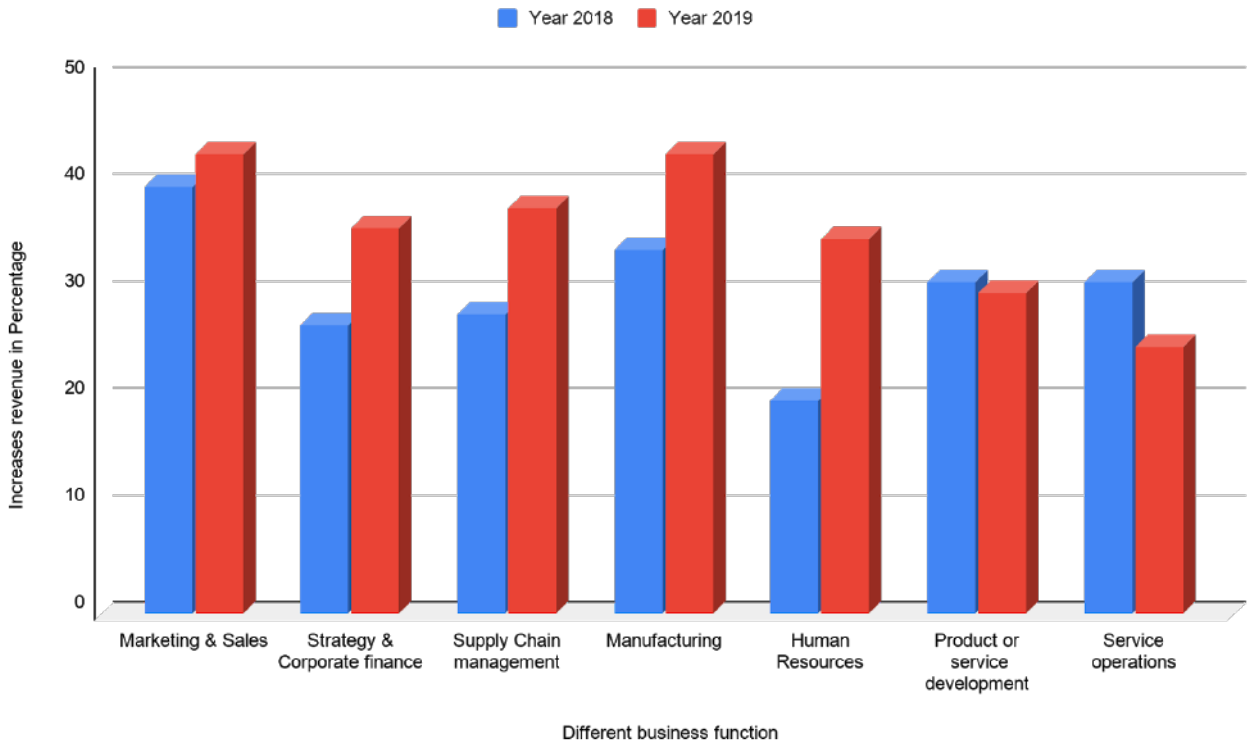

Figure: Increase in revenue due to AI

The figure above shows the yearly increase in revenue due to the adoption of AI for the years 2018 and 2019. You can see AI has impacted different business functions differently. Functions like marketing and sales, manufacturing, human resource management, supply chain management have seen a significant increase in revenue due to AI. Whereas, the functions like product development and service operations have not seen much of a difference in the two years.

Pandemic-mitigation measures have economically crippled many companies. However, the companies seeing significant value from AI are continuing to invest in it even during the pandemic. Automotive and assembly companies, healthcare services, and pharmaceuticals, and medical products manufacturing companies are most likely the ones that have doubled their investments in AI.

Future Work of AI in Business

Companies are accelerating their investment in AI as the pandemic has disrupted the physical processes of businesses pushing them to be more agile and fully digital. It has forced companies and consumers to change the operating and marketing system. According to a survey by McKinsey Global Institute, 85% of business companies are accelerating the implementation of digital technology. They are following the digital tool for employees interaction and collaboration like video conferencing, file sharing, cloud computing and so on etc. Around 67% of companies have accelerated automation through AI such as integrating chatbots, predicting & recommending mobile applications. You can read the detailed report on the survey conducted by McKinsey Global Institute here.

Artificial intelligence has the potential to make our lives easier, safer, and healthier. However, there are still a lot of untapped applications that are possible with the use of AI. Safer roads, human enhancement, unlimited virtual assistance, safety areas are some of the future areas of technology.

According to a report by the World Economic Forum, 133 million job roles emerge throughout the globe by 2022. If we take a look at the future of jobs and relate it to the global adoption of AI, we can see that the roles associated with AI, machine learning and data science top the list of the emerging jobs. Similarly, most monotonous jobs like data entry, book-keeping and assembling that can be effectively automated using AI, are the ones declining in the future. According to the report, the top 6 emerging and declining Job roles in the near future are:

- Emerging Job Roles

    a. Data Analyst and scientists
    b. AI & Machine Learning Specialists
    c. General and Operations Managers
    d. Software and Application Developers & Analysts
    e. Sales & Marketing Professionals
    f. Big Data Specialists

- Declining Job roles

    a. Data Entry Clerks
    b. Accounting, Book-keeping and Payroll Clerks
    c. Administrative and Executive Secretaries
    d. Assembly and Factory Workers
    e. Sales & Marketing Professionals
    f. Client Information and Customer Service Workers