

Midterm Case Analysis:

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ChatGPT (Microsoft) v/s Bard (Google)

*Homo sapiens*_(Human Beings) are considered Earth's most intelligent and competent species. Our brains give us this edge over other living species. We utilize this gift in various forms, the most unique of them being able to innovate the unthinkable – one such incredible innovation being Artificial Intelligence (A.I.). A few decades ago, it was considered fictional and rather inconceivable. It seemed a far-fetched dream until 1935 when Alan Mathison Turing, a logician, and a computer pioneer, propounded a mathematical possibility of A.I., suggesting that just like humans, who use the available and stored information to make decisions and find solutions, machines too can be programmed to do the same. Although this was genius but could not be implemented by Turin as desired because back then, computers were costly and not adequately designed to store information and commands as our brain does.

The 1950s saw innumerable scientists, philosophers, and mathematicians with brilliant ideas, but lack of funding and support could not put them to practice. 1956 was perhaps the year when A.I. got serious attention from the scientific fraternity when Allen Newell, Cliff Shaw, and Herbert Simon's presented the 'Logic Theorist' program at the Dartmouth Summer Research Project Conference on A.I. The presentation showcased how computers can mimic the human brain to solve problems. This event holds significance for A.I. in gaining ground, acceptance, and value. 1997 proved to be a landmark in establishing the supremacy of A.I. because it proved a prediction that Turing had made 50 years prior, when Garry Kasparov – The International Chess Champion, got defeated by Deep Blue – a chess computer built by IBM. The world was amazed and in awe.

Artificial intelligence products have evolved over the past 85+ years, the latest being ChatGPT, launched by Microsoft with its partner OpenAI on November 30th, 2022. It is the first-ever A.I.

program that has probably come closest to passing the Turing Test. This authentic test testifies for a computer's intelligence and thinking capability or an A.I. program. This sentient chatbot has become a rage worldwide for its proximity to human logic, thought process, and problem-solving skills. It has been trained precisely and crafted as a go-to model, proving great utility for human beings. It answers questions, rephrases, writes grammatically sound sentences, makes corrections while drafting letters, writes assignments, rejects inappropriate tasks, and, most importantly, accepts and rectifies its mistakes. No wonder it touched a startling one million plus user fan following within five days of its launch, as stated by Sam Altman - the dynamic trailblazer CEO of OpenAI. This, by far, is the most stunning path-breaking response to A.I. globally.

ChatGPT is a generative chatbot that interacts conversationally. It processes information the user provides just like humans do and remembers the previous information, enabling it to do follow-ups too. It is open to use by companies and individuals alike. This instantaneous popularity is attributed to its ease of use, a broad-spectrum platform known for quick responses.

February 8th, 2023, witnessed the launch of Bard – a chatbot by Google, in a grand fashion at a live event in Paris. Many considered it Google's defense mechanism to match Microsoft's successful launch of ChatGPT. On its Twitter feed, Google advertised its conversational bot – Bard, describing it as a 'search tool that simplifies complex topics' and a 'launch pad for curiosity.' They used a GIF to prompt Bard with a question about the James Webb Space Telescope, to which Bard responded that the telescope took the first pictures of exoplanets. However, this claim was false as the European Southern Observatory's telescope first captured images of exoplanets in 2004, as stated by NASA.

People were quick to point out Google's mistake, and social media was flooded with criticism for this premature decision of theirs. Google faced severe backlash for not fact-checking this claim by researching the most popular and authentic search engine – 'Google' itself. This ad

aired just before Google's senior executives promoted Bard as the future of their company. The presentation backfired, and the company got targeted for its unpreparedness.

This event led to significant financial loss for Google instantly. Alphabet Inc., the parent company of Google, lost \$100 million in market value. Google shares, which peaked at \$108.18 on February 7th, 2023, just a day before the Bard launch, crashed to \$99.37 within minutes of the Bard disaster to \$95.01 the next day and nosedived to an all-time low of \$84.86. The Co-founder of Deepwater Asset Management told CNBC he strongly felt that Alphabet's stock drop is facing an overreaction because Google is highly experienced and has expertise and experience in A.I. for a long time. Therefore, they would bounce back sooner than we think. Vinod Khosla, a venture capitalist, talks about the strengths of both Bard and ChatGPT in their realms. He states that both Google and Microsoft are A.I. giants who will bring different positive attributes to the world in a positive manner.

The annual report for Alphabet Inc. indicated a notable increase of 9.78% in sales from USD 257,637 million in 2021 to USD 282,836 million in 2022. Conversely, the net income and the basic earnings per share from continuing operations suffered significant losses of 21.04% (from USD 76,033 million to USD 59,972 million) and 19.31% (from USD 5.69 to USD 4.59), respectively. These losses can be attributed to increased operating expenses, higher tax rates, and investments in new business ventures.

Additionally, the COVID-19 pandemic hurt the company's financial performance, particularly in terms of demand for certain products and services. Another major reason is that Google's A.I. Chatbot named Bard made a factual error. The mistake caused a significant drop in Alphabet's shares, though they recovered within a short span of time. Despite the decrease in net income and earnings per share, the increase in sales is a positive sign and indicates that the company's products and services are still in demand.

Fluctuations in financial performance are not uncommon in huge companies such as Alphabet Inc. because they operate at several diverse levels involving many people and processes. While

the decrease in net income and earnings per share is a concern, the increase in sales suggests that the company is still performing well and has the potential for future growth.

Talking about Microsoft, we see that, in the year 2022, it earned a total revenue of \$198.27 billion, a significant increase of 17.96% compared to its previous year's revenue of \$168.09 billion. The company's earnings increased by 18.72% in 2022, as evident by its profit of \$72.74 billion in comparison to the previous financial year. This is indicative of the solid financial footing of the company. Google's Bard mistake proved beneficial for Microsoft, as its shares increased by three percent, and the company invested \$10 billion in OpenAI, the start-up that created ChatGPT. Microsoft announced that it would add ChatGPT to its Bing search engine for faster and better results.

Google has conflicting feelings about chatbots more than any other company. It has issued a "code red" warning since its capabilities could harm its \$162 billion business that displays ads on search results. Some employees criticized Pichai regarding the mishaps and described the internal rollout as rushed, poorly executed, and lacking foresight to the point of being comical. Google did not respond or comment when the reports asked to comment on their mishap.

It is uncommon for so many technological sectors to be exposed simultaneously. A.I. systems have the potential to disturb \$100 billion in cloud expenditures, \$500 billion in digital advertising, and \$5.4 trillion in e-commerce sales, according to figures from market research firm IDC and media agency GroupM. A.I. technology is gaining ground and is becoming popular globally both at corporate and personal levels. Netscribes, a global data and insights firm, offers services to some of the largest organizations in the world to adapt and understand new technologies and market trends beneficial for product development, marketing, sales, and innovation.

The analysts from UBS bank believe that generative A.I. such as ChatGPT will be a trillion-dollar market by 2030 across several domains and industries such as customer care, automation, email handling, speech and audio, computer code generation, education, analysis and insights, sales and marketing, retail, legal services, and healthcare to name a few. Though the world

would be revolutionized by bots such as ChatGPT and Bard, humans are prone to make mistakes, and so are these bots. These highly efficient, competent, and sentient bots have several drawbacks and risks. Sometimes they make and report false information, as seen in the case of Bard for reporting exoplanets. ChatGPT, too, is only trained to process information in 2021. Therefore, we should cross-check the information generated by them.

No matter the risks, A.I. is the new trendsetter, the dawn of a new era for humankind. Nobel prize winner Daniel Kahneman dedicated a lifetime to scrutinizing and documenting problems in human judgment. "Yes, A.I. may have flaws, but human reasoning is deeply flawed, too. Therefore, A.I. is going to win, Kahneman remarked in 2021. How people adjust is a fascinating problem."

Reuters reported a new world record created by Suffolk University Law School Dean Andrew Perlman, who wrote a law article of 14 pages in an hour – with none other than ChatGPT. While Bill Gates says that ChatGPT would take over monotonous office tasks and help employee productivity, Brian Burke – Research V.P. for Technology Innovation at Gartner, is hopeful that by 2025 A.I. technology would support 30% production of drugs and materials. He added that A.I., such as ChatGPT, has the expertise and capacity to boost creative work. Gal Feldman, ChatGPT and A.I. consultant said, "ChatGPT-like models can be used as virtual prosthetics in healthcare to assist individuals with neurodiversity, such as ADHD and autism, in improving their social, emotional, and communication abilities." He is also looking into possibilities of including people with neurodiversity in the workplace.

Such non-conventional thinkers give us hope for a bright and inclusive future. Global prosperity seems around the corner, with companies such as Microsoft, Google, Venture Capital Firms, and other tech firms investing billions of dollars to include and promote A.I. and make it mainstream for the benefit of people from all walks of life.

Companies can use several CSR (Corporate Social Responsibility) methods to make A.I. and chatbots ethical, including transparency, regulation, educational workshops, accountability, and collaboration. Companies can disclose the data and algorithms used by their A.I. and chatbot

systems to users, researchers, and stakeholders. This will help ensure that the systems make decisions based on ethical and unbiased criteria. They can work with policymakers and regulatory bodies to develop and enforce ethical standards for using A.I. and chatbots, including internal policies and procedures for monitoring and addressing ethical issues related to these systems. They can also train employees, customers, and the public on the ethical use of A.I. and chatbots.

Additionally, organizations can create a way for people whom A.I. and chatbots have harmed to make a complaint and regularly check and review how the systems are working to identify and solve any ethical issues. Stakeholders from diverse backgrounds could design and develop ethical guidelines and standards for using A.I. and chatbots. This can help ensure these systems align with broader social values and ethical principles. The companies can use CSR and KPIs (key performance indicators) to develop a strategic plan for the ethical use of A.I. in such a manner that is bias-free, is transparent about data and algorithms, complies with ethical standards, protects the privacy of its users, favors ethical decisions, and promotes social responsibility.

To conclude, the most crucial part of adopting AI as our future companion for improving our lives is approaching it progressively with a responsible attitude towards life and mother nature. A social media video on Facebook by TheREsource.tv with the title of the program “How Top Producers Are Leveraging AI In 2023!” highlights AI's numerous benefits and how it positively impacts human life. They say, “The goal of AI is not to eliminate jobs but to make jobs easier and more enjoyable.” and “By working with A.I, we can achieve more and make bigger impacts on our world.”

Misinformation and fear of technology are all over social media because they are opinion-based, not fact-based. To reap the benefits of AI and its infinite uses, we must ensure that the data is verified, the privacy and safety of individuals are taken care of, and there are procedures to follow that allow the ethical use of the technology.

As Gray Scott says, “You have to talk about 'The Terminator' if you're talking about artificial intelligence. I actually think that that's way off. I don't think that an artificially intelligent system

that has superhuman intelligence will be violent. I do think that it will disrupt our culture.” Therefore, we need to address and face the challenges and risks associated with AI upfront, solve them, and create a world conducive to growth, happiness, and progress.

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