OpenAI is an AI research and deployment company. Our mission is to ensure that artificial general intelligence benefits all of humanity.

Prepared By:

Competitive Strategists

(Team 3)

Ananya Roy Chowdhury

Mahender Reddy Kothakapu

Shorya Sharma

Snehashish Sourav Reddy Yellala

Varsha Vinod

CONTENTS:

SCQA:

- **Situation:**
  - **Fastest organization to reach 100 million user bases**: After OpenAI released AI chatbot ChatGPT as a small experiment over a two-week time period - offering human-like conversational responses to user questions, it reached 100 million monthly active users in just two months after its launch, making it the fastest-growing consumer application in history. Other applications which became highly successful took months or years to reach this number. This has created turbulence in the industry as OpenAI was founded as a non-profit startup and it came up with this revolutionary AI landscape catering to the consumer needs in every field, where people are using it in their day to day lives for composing music to writing codes.
  - **Microsoft's investment in ChatGPT and sharing their resources:** When OpenAI was facing financial complications to launch its products, Microsoft made a $1 billion bet on OpenAI, providing them money and cloud computing services in exchange for a license to commercialize its AI systems. This collaboration gave OpenAI access to Microsoft's technical expertise, brand value, customer segments, and the access to expand and develop its research developments in the future by leveraging Microsoft's cloud service as a platform to make these transformative technologies available on demand.
  - **Visionary in the AI market:** With people being more dependent on AI, the introduction of ChatGPT by OpenAI with its conversational AI service seems to be a game changer. But being very new in this market, OpenAI is still working on developing new technologies in collaboration with Microsoft. Different companies like CarMax have started incorporating this conversational AI into their services to reach a bigger audience crowd and many competitors are coming up with a similar AI framework in the market in the upcoming days.
- **Complications:**
  - **Regulatory law in the pipeline**.
  - **Competitors coming up with an improved product:** Companies like Baidu, Anthropic, DeepMind, and Google already launched/are coming up with their new conversational AI "Bard", which uses a similar mechanism to ChatGPT. However, they have the advantage of coming up with better user data and specific and insightful answers to user queries.
  - **Monetizing ChatGPT successfully**: OpenAI is becoming "ClosedAI" that aspires to concentrate access to AI to only the wealthy and repeating the whole cycle of inequality that was witnessed with the internet.
  - **Limited data used by ChatGPT corresponding to the competitors:** Since OpenAI is not incorporated with the search mechanism, it has limited data till 2021.

However, its competitors like Google have an advantage here since it has huge database to all the up-to-date information which it can use to come up with a better AI framework than OpenAI.
- Staying ethically responsible with AI while monetizing the platform
- **Question:**
  - OpenAI is riding atop the crest of an AI S-Curve tsunami. How will OpenAI climb back up to a plateau of productivity and maintain its current poll position in riding this new wave?

- **Answer:**
  - Open AI should concentrate on the two most complicated uncertainties which are technological advancements and the massive competition from big as well as small companies in the AI field. For this, they must make sure to keep working on the latest technological advancements in their AI products while at the same time keeping them ahead of their competitors in the market. They must strategize to keep themselves at the peak of the S-curve and maintain their position by understanding the latest market needs and easier ways to incorporate AI into common people's lives.

AGI Market Landscape:

The global artificial intelligence (AI) market size was estimated at US$ 119.78 billion in 2022 and it is expected to hit US$ 1,597.1 billion by 2030 with a registered CAGR of 38.1% from 2022 to 2030. The North America artificial intelligence market was valued at USD 147.58 billion in 2021.

Report Coverage	Details
Market Size by 2030	USD 1,597.1 Billion
Growth Rate from 2022 to 2030	CAGR of 38.1%
North America Market Share in 2021	42%
Software Segment Market Share in 2021	39%
Base Year	2022
Forecast Period	2023 to 2030
Segments Covered	Type, Technology, Solution, End User, Business Function, Deployment Mode, Organization Size, System Type, Geography
Companies Mentioned	Intel Corporation, Microsoft, IBM, Google, Amazon Web Services, Baidu, Inc., NVIDIA Corporation, H2O.ai., Lifegraph, Sensely, Inc., Enlitic, Inc., AiCure, HyperVerge, Inc., Arm Limited

Artificial Intelligence Market
Report Segmentation

GRAND VIEW RESEARCH

Regional Outlook
• North America
• Europe
• Asia Pacific
• South America
• Middle East & Africa

Artificial Intelligence Market

End-use Outlook
• Healthcare
• BFSI
• Law
• Retail
• Advertising & Media
• Automotive & Transportation
• Others

Solution Outlook
• Hardware
• Software
• Services

Technology Outlook
• Deep Learning
• Machine Learning
• Natural Language Processing (NLP)
• Machine Vision

Source: www.grandviewresearch.com

Key Takeaway:

- The Asia Pacific market is expected to grow at highest CAGR 42% from 2022 to 2030.
- Based on the technology, the deep learning segment has captured 39% market share in 2022.
- By solution, the software segment has accounted for a market share of over 41% in 2022.
- By end user, the advertising & media segment has accounted for 22% of the market share in 2022.
- North America accounted for 43% of the market share in 2022.

STEEP Analysis – Exploring key uncertainties in ChatGPT's future?

Societal:

Public perception poses as the biggest uncertainty under societal where it would be difficult to predict how the public would change their perspective on using ChatGPT over time. As the AI advances with more parameters and data points, there is a chance that the system develops a bias and that could impact the way the technology is adopted and used. Another prospect of this emerging technology could be displacement of jobs and that could negatively impact the way people perceive ChatGPT and OpenAI as an ethically responsible company.

Technological:

There are a multitude of technological factors that could affect the future of ChatGPT as follows-

- Bias – The fairness of ChatGPT and its outputs depends on the data used to train the model. This could lead to unintended responses and consequences that might drive users away from the software.
- Cybersecurity or data breaches – ChatGPT works with humongous amounts of data to maintain the quality and accuracy of its responses. An unexpected breach of its data centers could cause considerable damage to the model and hence halt the general functioning of the software.
- Tech advancements – As technology advances in the future, there is a high probability of newer AI models emerging with better predictability and accuracy. ChatGPT might struggle to keep up with these advancements and improve its computational performance with limited resources.
- Inaccuracies & Bizarre responses – Some AI experts have previously warned that large language models, or LLMs, have issues including "hallucination," which means that the software can make stuff up. There's a likelihood that sophisticated LLMs can fool humans into believing they are sentient or even encourage people to harm themselves or others.
- Scalability – As the parameters and metrics for the training models increase with the increase in data used, there would be an immediate need to expand and set up multiple data centers to be able to provide their services efficiently.

Economical:

If the market demand for AI unexpectedly decreases in the future, forcing users to stick to traditional search engines due to their accurate search results and general trust-ability, the development and usage of ChatGPT could be heavily impacted. One other factor that could contribute to a substantial economic uncertainty is the monetization model that OpenAI adopts for ChatGPT. The revenue they generate could be affected depending on if they choose to go with subscriptions, licensing, collaborations etc.

Environmental:

- Power Consumption and electronic waste – ChatGPT utilizes immense computational power to function as it's supposed to, causing them to use more energy. The system also releases electronic waste in terms of heat and carbon emissions that could negatively impact the climate in the long run.

- Supply chain disruptions – Open AI has multiple data centers located across various regions and in cases where there are supply chain issues, there could be a gap or delay in hardware components reaching the required data centers.

<u>Political:</u>

- Government regulations & policies – Governments around the world are deliberating on setting regulations around the use of Artificial Intelligence. If there happens to be limitations in the way ChatGPT is used and obstructs its capabilities, it could adversely affect how the software functions. There could be more policies with respect to accessing and using user data through user privacy laws.
- Political tensions – Conflicts in regions that are crucial to the development of ChatGPT could pose a threat to its general functioning. In countries that are completely opposed to this technology using user data, there could be a full-fledged ban like how China banned Google.

After considering all the factors that could impact the future of ChatGPT and OpenAI, the technological element is the most concerning in the immediate future and can be a major dealbreaker in the way the software functions.

<u>Competitive Landscape</u>

OpenAI is not a for-profit organization; it operates in a competitive landscape that includes several other organizations and businesses with similar goals and objectives, all of which are related to the advancement of artificial general intelligence.

Some of them are:

- <u>Incumbents</u>: Google DeepMind, Microsoft AI, Facebook AI Research (FAIR), IBM Watson, Amazon Web Services (AWS) AI
- <u>Insurgents</u>: Anthropic, Claude, Baidu Research, Google Bard, Inflection AI
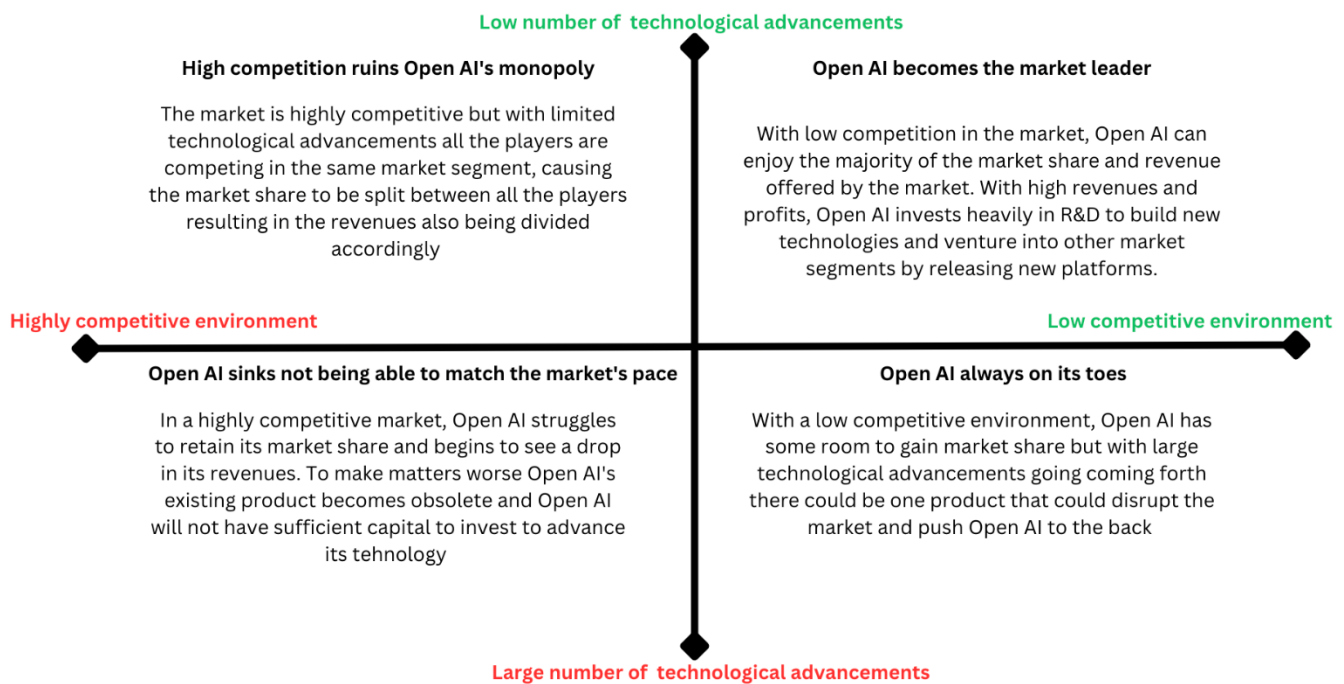- <u>Adjacents</u>: TikTok, Meta, Wordseye, NVIDIA, Amazon Alexa AI, Intel A.

Aside from these larger corporations, there are numerous smaller startups and academic institutions devoted to AI research and development. OpenAI competes with these organizations by attempting to attract and retain top talent, publishing groundbreaking research, and developing practical AI applications for societal benefit.

Uncertainties

The two most important uncertainties knowing which the company would be in a better position to address its future requirements.

- Competitors entering the market.
- Upcoming technology transition.

Scenario Map- Effect of factors like competition and technological changes on Open AI

Low number of technological advancements

High competition ruins Open AI's monopoly

The market is highly competitive but with limited technological advancements all the players are competing in the same market segment, causing the market share to be split between all the players resulting in the revenues also being divided accordingly

Open AI becomes the market leader

With low competition in the market, Open AI can enjoy the majority of the market share and revenue offered by the market. With high revenues and profits, Open AI invests heavily in R&D to build new technologies and venture into other market segments by releasing new platforms.

Highly competitive environment

Low competitive environment

Open AI sinks not being able to match the market's pace

In a highly competitive market, Open AI struggles to retain its market share and begins to see a drop in its revenues. To make matters worse Open AI's existing product becomes obsolete and Open AI will not have sufficient capital to invest to advance its tehnology

Open AI always on its toes

With a low competitive environment, Open AI has some room to gain market share but with large technological advancements going coming forth there could be one product that could disrupt the market and push Open AI to the back

Large number of technological advancements

DOTS: Reviewing different Drivers and opportunities that can facilitate the growth of OpenAI

Drivers:

- Growing demand for AI: The landscape is constantly changing, the demand for AI is increasing constantly in various sectors such as transportation, healthcare, infrastructure, and other industries. And because of this growing demand every major company in the tech space is company up with a new AI product which can drive the competition up.
- Transition in Technology: Because of the demand and the potential in this market every major company is investing millions in R&D to develop new and better iteration of the existing version, making it harder to keep up. And there are new Technologies such as Natural language processing, Autonomous systems and Explainable AI which may take the market from OpenAI if they fail to adapt.

Opportunities:

- Take advantage of customer base: Open AI has a first mover advantage, and it capitalized on this advantage to become the company with fastest growing customer base company in the world, it can use that to enter markets that were untapped by many different organizations.
- Collaboration with car makers to expand the market: Autonomous cars are growing traction lately and would require AI to make it an autopilot feature. Any company in this sector, which are traditional automobile industries that cannot develop an in-house product, will be a good chance for Open AI to tap into this market.
- Develop new and advanced tools: Because OpenAI already has the infrastructure and a well-trained workforce, it would be easy for them to develop a new project that uses AI and targets different market segments.

Threats:

- Data Privacy and Transparency: Open AI may be criticized for data and privacy because it requires large amounts of data to process information and produce results, but if the results are not accurate and biased or the data is breached, it may create a sense of mistrust in people.
- Increase in Competition: The market, which once used to be the blue ocean, is now the red ocean with the entry of large competitors who can spend billions of investments in R&D and trying to come up which a better version.

Strategy:

- Reinvesting the funds: Reinvest excess funds into Open-AI, onboard more students and scholars, and support their research and development. Which would be a much cheaper option to develop new technology and, at the same time, uplift the community.
- Expanding their product offerings: Open AI's current flagship product is the GPT language model, which is used for a variety of natural language processing tasks. In the long term, they may be looking to expand their product offerings into other areas, such as computer vision or robotics.
- Building partnerships: Open AI has already established partnerships with a variety of organizations, including Microsoft, IBM, and Tesla. And being a technical partner with these companies will give you an advantage while entering different markets. They may be looking to build more strategic partnerships in the long term to advance their research and product offerings.

Strategy Palette - Open AI is a visionary as they created a new market and revolutionized the AGI market space.
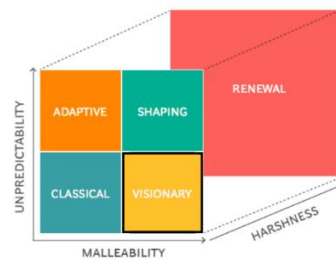
Strategic ChatGPT should consider dealing with the key uncertainties in that are visible in the near future

Short Term Strategy:

- To remain competitive and address prospective issues, the developers of ChatGPT (OpenAI) should continuously invest in ongoing research and development to improve the software's performance.
- Improving the training data and incorporating real-time information from the internet to keep the system updated against competitors and to stay relevant in the market.
- Enhance user experience with the software by developing new features in and around the search engine such as voice recognition tool in the search bar to convert voice commands into text, functionality to include multiple local languages with options to translate the ChatGPT outputs etc.

- Maintaining robust security and privacy measures to protect user information and data. This includes adding encryption or authentication along with preventing unauthorized access to the same.

Long Term Strategy:

- Creating a community of scholars and students like Discord to help consistently develop new AI capabilities, improve ethical responses, and promote a banner of responsible AI through constant human involvement.
- Integrating Open AI products into ChatGPT to make it a one-stop-shop platform for all AI-powered applications. Whisper, DALL-E2 and Alignment when incorporated into ChatGPT can enable intelligent voice functions that can define and differentiate local languages, accents, and verbal nuances. ChatGPT would also be able to produce and develop realistic artwork with voice/text commands along with comprehending human intent.
- Creating key partnerships –
    1. Automotive: Partnering with autonomous car manufactures such as Tesla to introduce Intelligent Assistance that could provide real-time data to drivers regarding the weather, the most efficient route to take, cafes/restaurants nearby and immediate alerts for upcoming roadblocks or constructions.
    2. Tech & E-commerce: OpenAI can collaborate with tech companies to provide complementary AI services to their customers. They can additionally partner with E-commerce companies to provide personalized chatbots that provide customized product search & recommendations keeping in mind the preferences of the users.
    3. Healthcare: Partnering with hospitals, clinics, and diagnostic agencies to use empirical and historical data to provide health care physicians and frontline works with accurate medical information to help them make informed decisions.
    4. Education: Collaborate with educational institutions to promote a positive use case for students (in view of institutions banning ChatGPT). For example, ChatGPT can understand the personal learning styles and preferences of students to provide a customized plan, study materials and schedule. It can be used constructively to help students learn grammar and pronunciation in English and local languages. It can even provide educational resources that are tailored to their major, career path and experiences to help them comprehend information better.
    5. Autism & Mentally Disabled Communities: Open AI can interact with social organizations to provide a more holistic communication & emotional support that allows autistic people to express themselves more freely and

naturally. By analyzing their language and interaction patterns, ChatGPT can provide suggestions on cognitive & behavioral therapy that are more personalized and would help them develop skills at a faster pace. Moreover, it can provide educational and informational content in an entertaining and engaging way to make learning a fun activity.

References – sources for extra information used

- [Artificial Intelligence Market Size & Share Analysis Report 2030 (grandviewresearch.com)](#)
- [Artificial Intelligence (AI) Market Size, Growth, Report 2022-2030 (precedenceresearch.com)](#)
- [How ChatGPT Broke the AI Hype Cycle (analyticsindiamag.com)](#)
- [Will OpenAI Chatbot ChatGBT Be The End Of Google? (NASDAQ:GOOG) | Seeking Alpha](#)
- [Explaining AGI & OpenAI — The Future of Technology | by Opal A Roszell | CodeX | Medium](#)
- [AI is harming our planet: addressing AI's staggering energy cost (numenta.com)](#)