FIVE TRENDS SHAPING THE FUTURE OF THE ARTIFICIAL INTELLIGENCE MARKET

Artificial Intelligence (AI) is bringing revolutionary changes in technological fields ranging from deep learning to advanced computer vision. It is implemented to automate a system to deliver better efficiency and performance, and to support decision-making. Artificial intelligence is making devices smarter, data more valuable, and cloud-based tools more efficient. Increasing demand for virtual assistance to enable easy accessibility of services, along with growing

adoption of cloud-based technology, is driving the artificial intelligence market.
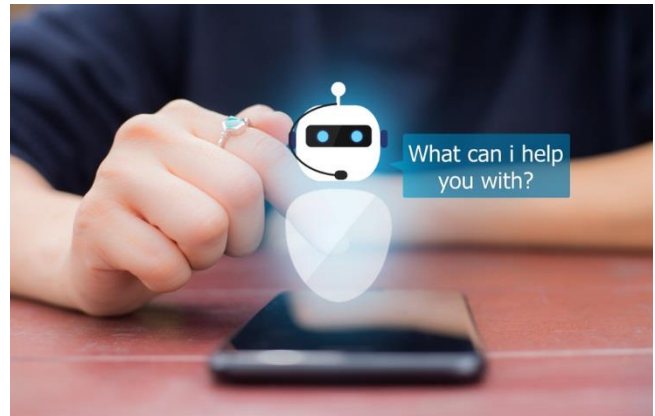
The artificial intelligence market is divided into several segments, such as machine learning, natural learning processing, and others. Key players in the artificial intelligence market include Google, Siemens AG, Apple Inc., Samsung, and Amazon. These have been working on different strategies to drive sales using highly influential marketing approaches; however, as we examine the challenges and opportunities ahead in this market, companies can benefit from the strategy of conversational AI and AIOT, along with the key target market trends we have identified. Lucintel predicts that the global artificial intelligence market will be valued at $70 billion by 2025, with an expected CAGR of 20% to 22% between 2020 and 2025.

Lucintel identifies five trends set to influence the global artificial intelligence market. Most of the industry players and experts agree that these five trends will accelerate developments in the artificial intelligence industry in the near future. In terms of the widespread knowledge about the artificial intelligence market already on the horizon, there is still a lack of unified perspective on the direction the industry is moving to proactively address developments. To help bring more clarity to this gap, our study aims to provide insights concerning the direction that changes are taking and how these changes will impact the artificial intelligence market.

1. Growing Adoption of Conversational AI

Conversational AI can communicate like a human by recognizing speech and text, understanding intent, deciphering different languages, and responding in a way that is similar to human conversation. AI-powered chatbots, also known as Conversational AI, enhance the customer experience in reach, responsiveness, and personalization. To better understand what the human being says and needs, the AI-powered chatbot uses natural language processing (NLP) and machine learning to provide a more natural and near-human level interaction. Conversational AI such as virtual personal assistants, virtual customer assistants, and chatbots are becoming the mainstream for businesses. Today, companies are using conversational AI chatbots to schedule meetings, carry out airline transactions, and cross-sell products, thus providing an improved customer experience. Amazon Echo and Google Homes are the best examples of conversational AI.

2. Artificial Intelligence and Internet of Things (AIoT)

The combination of artificial intelligence with the Internet of Things forms an interesting new study called the Artificial Internet of Things, or the AIoT. The IoT enabled with AI is capable of creating intelligent machines that can simulate smart behavior while supporting decision-making ability with little or no human interference. The blend of AI and IoT enables an organization to reach greater heights by providing intelligent decision-making, accurate prediction, identification of cost savings, increased operational efficiency, and customer delight. Alexa, Siri, Google Maps, and Netflix are some examples of AIoT.

3. Robotic Process Automation (RPA)

Robotic Process Automation (RPA) provides organizations with the ability to reduce staffing costs and human error. To streamline business processes and to reduce costs, more CIOs are adopting an evolving technology practice called Robotic Process Automation (RPA). With RPA, organizations can automate rule based tedious business processes, allowing their workforce to devote more time to serving clients or do other higher-value work. RPA is aimed at the automation of business processes, governed by business logic and organized inputs. RPA solutions can range from something as easy as producing an automated email response to deploying thousands of bots, each programmed in an ERP system to automate rule based tasks. Today's software based robots will take on the repetitive but necessary work that we carry out on computers. Filling in forms, generating reports and diagrams, and producing documentation and instructions are all tasks that can be automated to be done by machines that watch what we do and learn to do it for us in a quicker manner. RPA is being implemented across industry verticals such as manufacturing, KPO, HR, and finance.

4. Use of Artificial Intelligence in Various Industries

Artificial Intelligence is being integrated into multiple industries and further there is great potential

for AI in new fields to improve productivity and efficiency. The uses of AI in some of these industries are listed below.

Artificial Intelligence in Healthcare

AI is fast becoming a critical part of the healthcare industry. AI is playing a key role in empowering machines to diagnosis, analyze, and predict various types of diseases, monitor patients' health conditions, and help scientists explore the area of new drug discoveries to avoid health problems. A vast amount of patient healthcare data has been collected in recent years. With AI, that data can be sorted, organized, and interpreted, helping doctors and nurses, in terms of efficiency, make better and more informed patient care decisions.

The healthcare industry can also use AI for diagnostics, for example to detect small variations within patients' health data, compare them to similar patients, and enhance imaging diagnostics in radiology and pathology. AI can also help identify potential pandemics early and track the incidence of diseases to help prevent or contain their spread.

Artificial Intelligence in Industry 4.0

Industry 4.0 is an intelligent manufacturing system which focuses on the design, manufacturing, and customized product and service delivery as per individual requirements. Artificial intelligence pervades the entire Industry 4.0 and is not only limited to the production floor. One example of this is the use of AI algorithms to optimize supply chains of manufacturing operations and to help them better respond to and

anticipate changes in the market. Many companies are using artificial Intelligence to increase sales, productivity, speed, efficiency, and targeting, and to create new products and generate significant business growth. Alibaba uses artificial intelligence to help map the most efficient delivery routes. At Amazon, AI helps drive the algorithms that are essential to Amazon's targeted marketing strategy and it is used to predict which products will be most in demand in the future.

Artificial Intelligence in Cybersecurity

Artificial intelligence plays a major role in cybersecurity systems for both corporate systems and home security. Cybersecurity developers are constantly working on updating their technologies to keep up with continuously evolving threats such as DDS attacks, malware, ransomware, and more. AI-powered cybersecurity tools can gather data from a company's communication networks, transactional systems, digital activity, websites, and external public sources, and use AI algorithms to recognize patterns and identify threatening activity such as identifying suspicious IP addresses and possible data breaches. Google, IBM/Watson, Juniper Networks, and Balbix are companies that have enforced good practices concerning AI in cybersecurity.

Artificial Intelligence in Autonomous Vehicles, or Self-Driving Cars
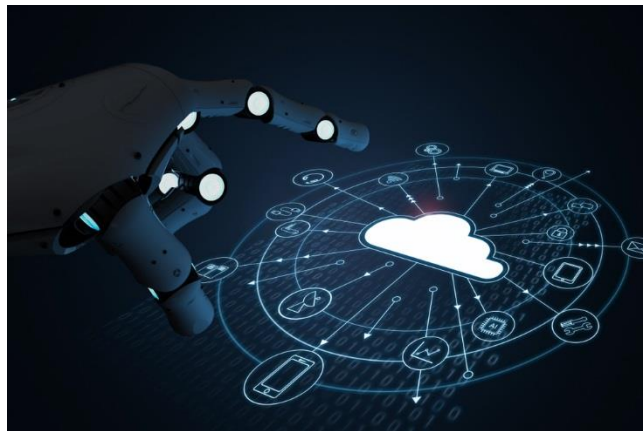
Autonomous vehicles, or self-driving cars, are examples of AI. Autonomous vehicles are being equipped with AI based functional systems such as voice and speech recognition, gesture controls, virtual assistance, mapping and safety systems, eye tracking, and other driving

monitoring systems to enable the machine to work automatically and also understand the nearby surroundings and real-life scenario of the environment.

5. Artificial Intelligence and Cloud Computing

AI cloud computing is the integration of the machine learning capabilities of artificial intelligence with cloud based computing environments to help make intuitive and connected experiences possible. Digital assistants such as Siri, Amazon Alexa, and Google Home combine a seamless flow of artificial intelligence technology and cloud based computing resources to enable users to make purchases, adjust a smart thermostat, or instantly listen to a favorite song.

Strategic Considerations for Key Players in the Artificial Intelligence Market

The artificial intelligence industry is dynamic and ever-changing. Successful industry players are masters of innovation, change, and adaptation. To retain this status, they need to be attentive to current trends. We believe there will be promising opportunities for artificial intelligences in the healthcare, security, retail, automotive, manufacturing, and financial technology (fintech) sectors. As per Lucintel's latest market research report (Source: https://www.lucintel.com/artificial-intelligence-market.aspx), the artificial intelligence market is expected to grow with a CAGR of 20% to 22% between 2020 and 2025, and reach $70 billion by 2025. This market is primarily driven by increasing demand for virtual assistance for easy accessibility of services and growing adoption of cloud based technology.

Trends and Forecast for the Global Artificial Intelligence Market (US $B) (2014-2025)
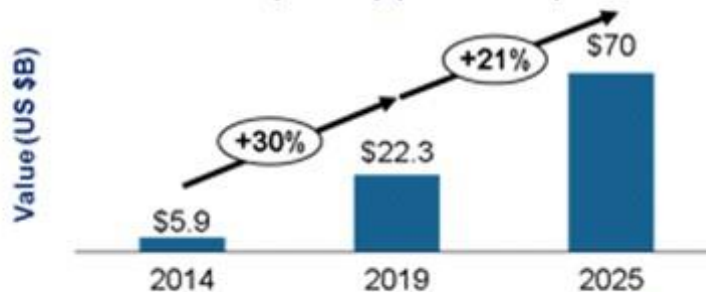
Source: Lucintel

Whether you are new to the artificial intelligence market or an experienced player, it is important to understand the trends that impact the development process, as these trends as listed above will lead players to create long-term strategy formulation that will allow them to remain competitive and successful in the long run. For example, to capture growth, some of the strategic considerations for players in the artificial intelligence market are as follows:

- Players can develop capabilities in conversational AI which enhance the customer experience in reach, responsiveness, and personalization.
- Robotics and artificial intelligence have an enormous scope of use in the future. The integration of data science projects, as well as robots, has tremendous potential for enforcing top-notch product manufacturing in industry with very little human effort.
- Players can focus on AI in the healthcare industry as it helps to identify potential pandemics early and track the incidence of diseases to help prevent or contain their spread. Using AI in hospitals will automate certain tasks such as triage and diagnosing patients, and can evaluate patients' medical records in order to best assess high-risk individuals.
- Autonomous driving is one of the key application areas of artificial intelligence. Players can focus on self-driving cars' AI software systems which are expected to lead future

trends.

- Artificial intelligence market players can focus on AI-enabled automated threat intelligence and prevention systems, as well as fraud analysis and investigation systems.
- Investment in increasing competencies in AI-enabled expert shopping advisors and product recommendations.
- Research and development activities to develop low-cost AI solutions.

Note: In order to gain better understanding, and learn more about the scope, benefits, and companies researched, as well as other details in the artificial intelligence market report from Lucintel, click on https://www.lucintel.com/artificial-intelligence-market.aspx. This comprehensive report provides you in-depth analysis on market trends and forecast, segment analysis, regional analysis, competitive benchmarking and company profiling of key players. In addition, we also offer **strategic growth consulting** to meet your customized needs. We have worked with many PE firms and corporate customers in the process of their market entry and M & A initiatives.

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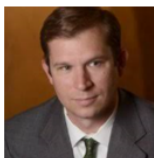Email: sanjay.mazumdar@lucintel.com
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