
INDUSTRY OVERVIEW

The information that appears in this Industry Overview contains information and statistics on the industry in which we operate. The information and statistics contained in this section have been derived partly from publicly available government and official sources. Certain information and statistics set forth in this section have been extracted from a market research report by Frost & Sullivan (the “Frost & Sullivan Report”), an Independent Third Party which we commissioned. We believe that the sources of information contained in this Industry Overview are appropriate sources for such information and have taken reasonable care in reproducing such information. We have no reason to believe that such information is false or misleading or that any material fact has been omitted that would render such information false or misleading. The information from official government sources set out in this Industry Overview has not been independently verified by us, the Joint Sponsors, the Joint Representatives, the Joint Global Coordinators, the Joint Bookrunners, the Joint Lead Managers, any of the Underwriters, any of our or their respective directors, officers, employees, advisors, agents or representatives or any other party involved in the Global Offering and no representation is given as to its accuracy and the information from official government sources should not be relied upon in making, or refraining from making, any investment decision.

ARTIFICIAL INTELLIGENCE IS A TRANSFORMATIONAL FOUNDATION TECHNOLOGY WITH PROFOUND IMPACT ON MANKIND

Artificial intelligence (AI) is a branch of computer science that seeks to create software that simulates human intelligence by enabling machines to mimic the perceptual and cognitive functions normally associated with the human mind, such as seeing, learning and problem solving. The AI in use today primarily focuses on performing specific tasks, enabling robust applications found in computer vision, audio processing, natural language processing and data science.

AI is now being integrated into various aspects of daily life and represents a transformational foundation technology that will have a profound impact on the development of mankind. Global AI-enabled business opportunities as measured by the global nominal GDP boosted by AI technologies are expected to reach USD10 trillion in 2025, according to Frost & Sullivan.

AI MODELS ARE THE CORE BUILDING BLOCKS FOR THE AI INDUSTRY

AI models are the core building blocks of AI software. AI models are mathematical algorithms which can take unstructured data as input and transform them into informative output through its “intelligence,” namely, the capability of perceiving the world, transcribing and organizing information, enhancing or generating contents, or making decisions. AI models are produced by a training process that typically requires a large amount of computing power and data. An AI application, which is developed to increase efficiency, improve productivity and enhance life experiences, is a software product that integrates a group of AI models.

Breakthroughs in Deep Learning Technology

Machine learning, a key branch of AI research, is the design and use of computer algorithms that improve through experience and iterations. Deep learning is a subfield of machine learning,

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where the deep learning models automate much of the data processing, eliminate some of the manual human assistance and enable the use of very large datasets. As massive training data is fed into the network, the deep learning model's parameters are gradually improved, resulting in better performance and accuracy. The rise and propagation of deep learning methodologies have resulted in higher performance of AI models, and significant advancement in recognition accuracy across AI-related disciplines, in particular, computer vision.

Growing Number of IoT Devices Fueling Substantial Data Growth

The number of IoT devices, primarily including smartphones, automobiles and sensors, was 17.7 billion at the end of 2020 and is expected to rise rapidly at a CAGR of 28.9% to reach over 63.0 billion by 2025, according to Frost & Sullivan. Data generated or captured by such connected devices has been growing rapidly and is expected to account for more than 40% of global data volume by 2025. Global data volume is expected to increase from 66 zettabytes (ZB) in 2020 to 190 ZB in 2025, representing a CAGR of 23.5%. As the number of IoT devices increases, AI models play a key role in processing massive amount of data generated every day. Advances in the quality and quantity of AI models have enabled a wider range of AI applications, which further lead to a larger volume of data facilitating the training and development of AI models.

Increasing Computing Power Supported by Build-out of Digital Infrastructure

Substantial computing power is the prerequisite for the large-scale training and production of AI models. The building of advanced digital infrastructure and development of specialized technologies, such as AI chips, are enabling the growth of computing power. AI digital infrastructure, including 5G and IoT networks, cloud-based computing and large-scale data centers, is being built globally to enable efficient real-time data transmission, processing and storage. In China, the development of digital infrastructure has progressed significantly in recent years. In 2020, China announced the national policy of "New Infrastructure" to promote investment in areas such as AI, large-scale data centers, the Industrial Internet and 5G. The development of specialized AI chips and cloud computing are also boosting computing efficiency and reducing computing costs.

The above trends and developments have created a competitive advantage for leading AI players, who are generally equipped with advanced technology and adequate resources. By effectively mass-producing AI models, leading AI companies are able to develop applications for complex scenarios with high accuracy and cost effectiveness, thus generating economies of scale.

OVERVIEW OF THE AI SOFTWARE MARKET

With the proliferation of data, digital transformation has become a global trend. Enterprises and public sector are relying more on software to innovate and enhance their operational efficiency and results. Meanwhile, consumers increasingly demand software that makes their daily lives more convenient and enjoyable. The global software market is expected to reach USD1,098.4 billion in 2025, representing a CAGR of 12.0% from USD622.7 billion in 2020, according to Frost & Sullivan. Meanwhile, spending on software relative to global GDP is expected to increase from 0.7% in 2020 to 0.9% in 2025.

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As the quantity and complexity of captured data grow, traditional software becomes inadequate in analyzing and extracting useful information from them, which creates demand for AI technology. Global spending on AI technology, including AI software, hardware and services, is expected to reach USD221.2 billion in 2025, representing a CAGR of 26.3% from USD68.7 billion in 2020, according to Frost & Sullivan.

AI software, with its ability to utilize massive data, is expected to represent an increasingly significant portion of software spending. AI software will be the fastest-growing and largest segment of the AI technology market, projected to account for approximately 55.1% of global AI technology market in 2025. The global AI software market size is expected to reach USD121.8 billion in 2025, representing a CAGR of 31.9% from USD30.5 billion in 2020, according to Frost & Sullivan.

China is the second-largest AI software market, after the United States. The AI software market in China is expected to grow at a CAGR of 41.5% from RMB29.5 billion in 2020 to RMB167.1 billion in 2025, which would make it the fastest-growing among major markets globally. The contribution of AI software to the China software market is projected to rise from 9.0% in 2020 to 24.1% in 2025, according to Frost & Sullivan.

AI SOFTWARE MARKET SEGMENTS

AI software markets can be categorized into computer vision, speech recognition and natural language processing, and data science, according to Frost & Sullivan. These fields are mainly supported by four types of AI models, namely, (i) perception intelligence, (ii) decision intelligence, (iii) AI-enabled content generation, and (iv) AI-enabled content enhancement. Computer vision is a major perception capability that has been successfully commercialized through industry-grade mass production of AI models.

Computer vision is an interdisciplinary scientific field that enables computers to analyze digital images or videos in order to extract data, perform analysis and automate certain tasks. Over 80% of information processed by human brains comes from eyes, according to Frost & Sullivan. Such massive amount of visual information can be analyzed through computer vision, which makes it a vital AI subfield with wide applications across industries. Computer vision software is the largest segment of the global AI software market at 46.9% in 2020 and is expected to reach USD68.0 billion in 2025, representing a CAGR of 36.6% from USD14.3 billion in 2020.

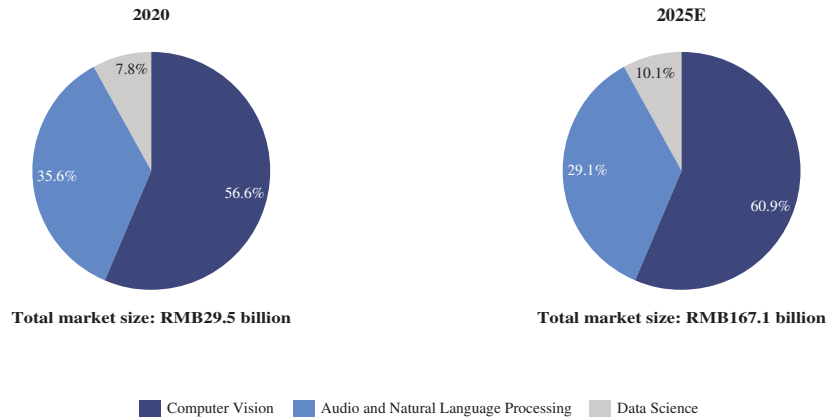
Speech recognition refers to the technology that recognizes spoken words and converts them into texts, while natural language processing refers to the technology that can understand and interpret texts and provide requested feedbacks. They are mostly used for voice services in scenarios such as smart cabin, robots interactions, and voice assistants.

Data science usually follows the application of computer vision, speech recognition and natural language processing. It encompasses decision intelligence related technology applications, such as the control of vehicles in autonomous driving, action recommendations and alerts in spatial management, and intelligent human machine interactions, creating a growing market for data science software.

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The computer vision software market in China is projected to reach RMB101.7 billion in 2025, representing a CAGR of 43.5% from RMB16.7 billion in 2020. Audio and natural language processing software is projected to reach RMB48.6 billion in 2025, representing a CAGR of 35.9% from RMB10.5 billion in 2020. Data science software market is projected to reach RMB16.8 billion in 2025, representing a CAGR of 48.8% from RMB2.3 billion in 2020.

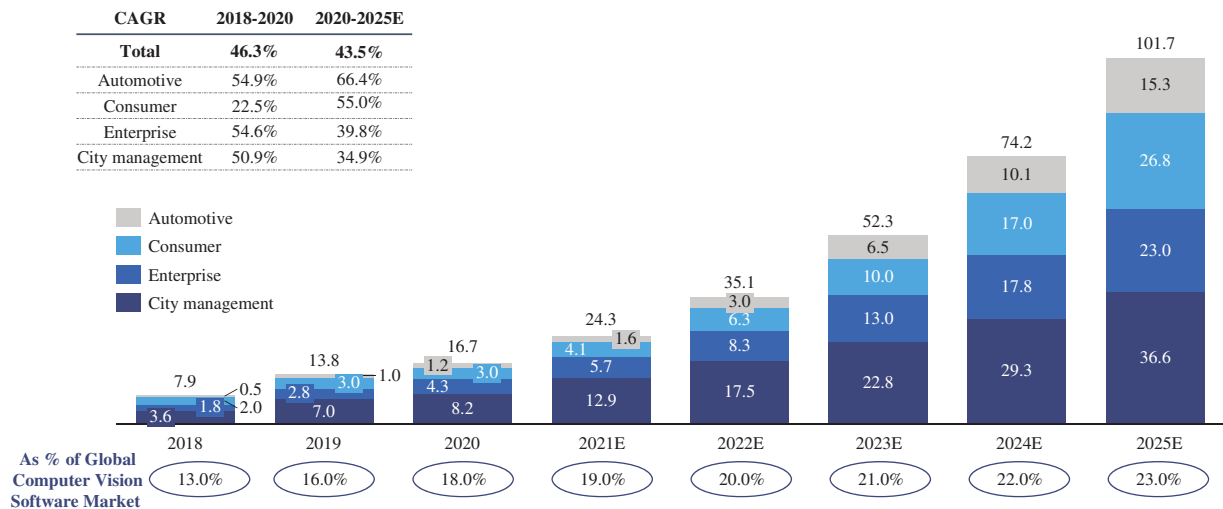
AI Software Market by Segment in China



OVERVIEW OF THE COMPUTER VISION SOFTWARE MARKET IN CHINA

The computer vision software market in China is projected to grow at a CAGR of 43.5% from RMB16.7 billion in 2020 to reach RMB101.7 billion in 2025, accounting for 23.0% of the global computer vision software market, compared to 18.0% in 2020, according to Frost & Sullivan.

Market Size of China Computer Vision Software Market (RMB Billion, 2018-2025E)



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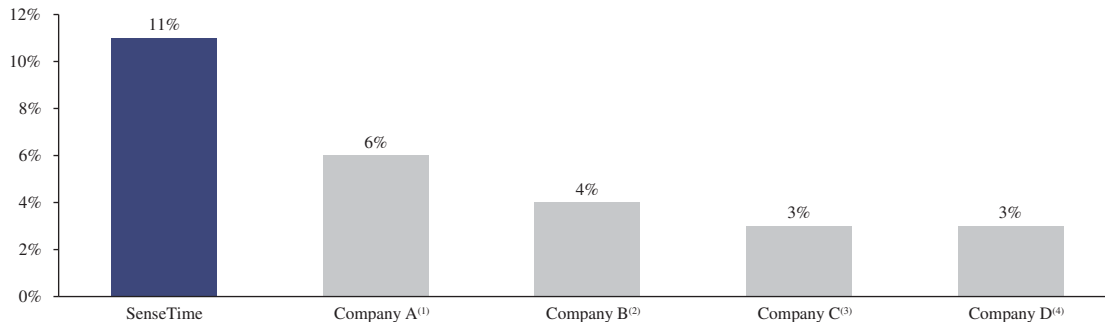
COMPETITIVE LANDSCAPE

SenseTime is the largest AI software provider in terms of revenue in Asia in 2020, and the largest computer vision software provider in China in terms of revenue in 2020, according to Frost & Sullivan.

SenseTime's competitors in the computer vision software market in China can be categorized into (i) computer vision-centric software companies; (ii) computer vision related hardware providers; and (iii) cloud service providers, according to Frost & Sullivan.

The following graph shows the market share of the top five computer vision software providers in China by software revenue in 2020:

Market Share of Computer Vision Software Providers in China, 2020



Notes:

- (1) Company A is a leading computer vision-related hardware provider with businesses mainly covering the public sectors and enterprises. Company A is listed on the Shenzhen Stock Exchange.
- (2) Company B is a leading cloud service, telecom equipment and consumer electronics provider.
- (3) Company C is a leading computer vision-centric software company with businesses mainly covering public sectors and enterprise applications.
- (4) Company D is a leading technology company offering Internet-related services and products in entertainment, artificial intelligence, cloud services and other technologies. Company D is listed on both Nasdaq and the Stock Exchange.

Entry Barriers

The entry barriers for the computer vision software industry primarily include:

- **Technology innovation capability.** Technology capability sits at the very core of business development for computer vision software providers. As new application scenarios for computer vision software continue to emerge, computer vision software providers have to develop one-stop software platforms that offer a large number of applications to address

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special needs of diversified long-tail scenarios efficiently. Furthermore, it is necessary for a leading player to have full-stack technology capabilities, including software-defined computing processing power, algorithms and software solutions, to improve its platform-based cross-scenario service capabilities.

- ***Computing infrastructure.*** In order to process the massive amounts of data generated and to train high performance AI models, it is critical for computer vision software providers to invest heavily in constructing their own computing infrastructure or procuring infrastructure services. Such intensive investments can be a barrier for new entrants.
- ***Talent Acquisition and Retention.*** With the rapid development of the industry and the widespread deployment of AI software solutions, the ability to consistently attract and retain experienced and skilled talents has become a key driver of long-term business success.

Threats

The threats to the computer vision software industry primarily include:

- ***Ethical concerns of artificial intelligence.*** The application of computer vision in various scenarios involve ethical issues such as privacy concerns, AI responsibility and the delegation of decision making, transparency, and bias, which arise at all stages of decision making processes.
- ***Concern on data security and privacy.*** Data security and privacy remain major concerns for many computer vision software companies. As the training of AI models requires large amounts of data input, and the inference of AI models often involves processing of real-world data, organizations and individuals are increasingly concerned about the security and privacy of the data provided to and processed by computer vision software companies.

COMPUTER VISION SOFTWARE FOR ENTERPRISE APPLICATIONS IN CHINA

Enterprises can digitalize their operations by deploying AI models across various scenarios.

Key Trends and Drivers

According to Frost & Sullivan, the key growth drivers of China's computer vision software market for enterprise applications include:

Operation Management Optimization

Traditional industries and enterprises seek to improve operating efficiency. For example, many residential communities demand simplified and intelligent ways to manage environment and personnel to improve productivity and customer experience. Enterprises are increasingly incentivized to adopt various AI models to help optimize operations to improve efficiency.

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Labor Efficiency Improvement

Labor costs have been on the rise due to talent scarcity and general economic development. AI technology can in many cases reduce human inputs required and increase efficiency and accuracy. For example, in quality control management, traditional manual sampling can be inconsistent, inefficient and costly. Quality control through AI model-enabled automated sampling and testing can save man hours, enhance efficiency while lowering defect rate.

User Experience Enhancement

Enterprises use AI software to provide differentiated services and offerings to their end users, enhancing the latter's experience and hence gaining a competitive edge commercially. For example, in shopping malls, AI software can be used to provide indoor navigation and digital personal assistant to make the user experience more interactive and attractive. By utilizing the functions provided by AI models, businesses can significantly increase the variety and efficiency of their services and hence deliver more value to customers.

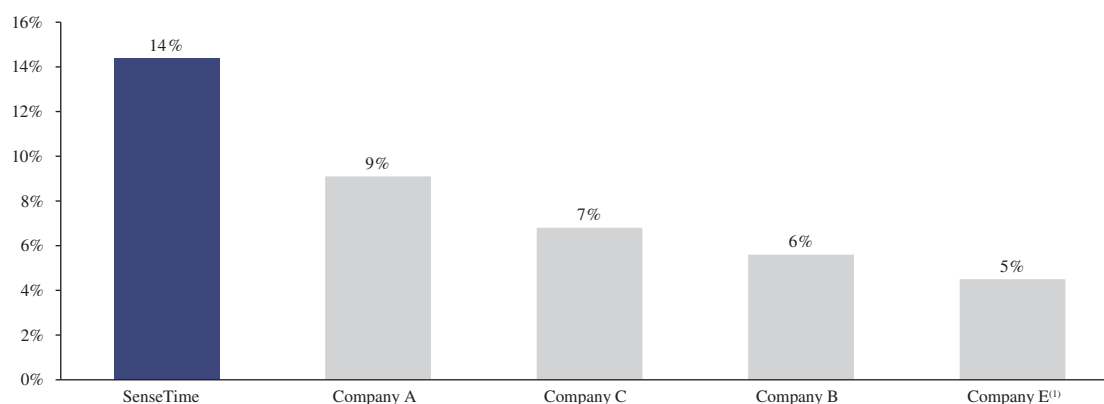
Market Size

The computer vision software market for enterprise applications in China is expected to reach RMB23.0 billion in 2025, representing a CAGR of 39.8% from RMB4.3 billion in 2020, according to Frost & Sullivan.

Key Players & Market Positions

SenseTime is the largest computer vision software provider for enterprise applications by software revenue in China in 2020, according to Frost & Sullivan. The following graph shows the market share of the top five computer vision software providers for enterprise applications in China by software revenue in 2020.

Market Share of Computer Vision Software Providers for Enterprise Applications in China, 2020



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Note:

- (1) Company E is a leading computer vision-centric software company with businesses mainly covering the financial and public sectors.

COMPUTER VISION SOFTWARE FOR CITY MANAGEMENT APPLICATIONS IN CHINA

China is one of the pioneers in AI-empowered city management. Urbanization and population growth in China's major cities have changed the landscape of city management. As visual data is continuously generated by IoT devices, AI models trained and improved with such massive data can provide insights for city management. City administrators can use AI software to advance urban digital transformation, provide a safer and more convenient environment for residents and improve public services in traffic management, safety, environmental protection, urban management and emergency responses.

Key Trends and Drivers

According to Frost & Sullivan, the key growth drivers of China's computer vision software market for city management applications include:

Increasing City Management Complexity

The analysis of unstructured visual data captured in cities requires a large amount of manpower, a growing challenge for city administrators due to labor shortage and budgetary restraints. In addition, there are limited resources to perform real-time analysis of videos and images, and tackle specialized needs of numerous long-tail scenarios. City administrators have been utilizing AI software to solve these issues. For example, computer vision technology can help ease traffic delays and reduce accidents with traffic signal intelligence, path optimization and intelligent navigation.

Increasing Demand for Timely Emergency Response

City administrators face increasing difficulties in timely identifying and responding to incidents and emergencies. By analyzing video footages, and extracting useful data, AI models allow for real-time analysis of the physical world and thus help city administrators quickly respond to alerts. For example, with the help of computer vision technology and wide deployment of IoT devices, fire departments can receive timely and accurate reports of fires, while emergency vehicles can have their driving routes optimized based on real-time traffic data.

Market Size

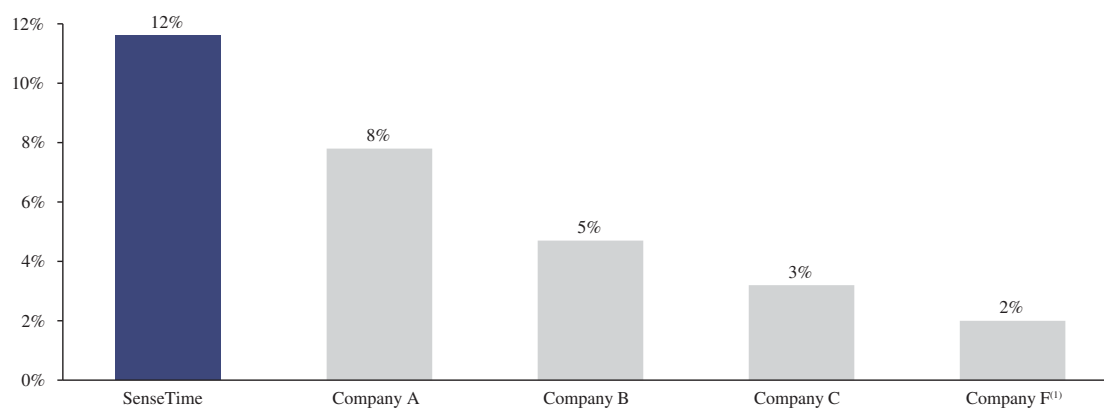
The computer vision software market for city management applications in China is expected to reach from RMB8.2 billion in 2020 to RMB36.6 billion in 2025, representing a CAGR of 34.9%, according to Frost & Sullivan.

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Key Players & Market Positions

SenseTime is the largest computer vision software provider for city management applications in China in terms of software revenue in 2020, according to Frost & Sullivan. The following graph shows market share of the top five computer vision software providers for city management applications in China by software revenue in 2020.

**Market Share of Computer Vision Software Providers
for City Management Applications in China, 2020**



Note:

- (1) Company F is a leading computer vision-centric software company, with its businesses including city management, enterprise and consumer applications.

COMPUTER VISION SOFTWARE FOR CONSUMER APPLICATIONS IN CHINA

AI technology and its applications are increasingly important in the overall consumer experience, providing consumers with new forms of services for media, entertainment, social activities and healthcare. In addition, the physical world and virtual world converge through various IoT devices, including smartphones and AR/VR devices. This trend leads to the emergence of the Metaverse, referring to the convergence of physical, augmented and virtual reality in one shared online space.

Key Trends and Drivers

According to Frost & Sullivan, the key trends and drivers of China's computer vision software market for consumer applications include:

Proliferation of IoT Devices

The growth of AI software market for consumer application is driven by a growing number of IoT devices. Coupled with high-speed networks and cloud computing, these devices are capable of

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generating and transmitting massive amount of data, thus creating a conducive backdrop for widespread adoption of AI models. Furthermore, IoT devices increasingly incorporate AI models to enhance their performance and functionalities.

Increasing Demand for AI-enhanced User Experience

AI technology can create more immersive user experiences, leading to growing consumer demand in areas such as tourism, social networking, online shopping and gaming. In particular, the Metaverse has the potential to become a universal platform for future social interactions, empowered by AI models.

Expanding AI Applications in the Healthcare Industry

AI technologies have been increasingly adopted in healthcare industry to facilitate precise diagnosis and treatment. AI models can be deployed in a wide range of clinical scenarios to support hospital departments, such as radiology, cardiology, orthopedics and pathology. Furthermore, AI has the potential to revolutionize drug discovery process in various ways, such as generating properties and structures of potential complex molecules.

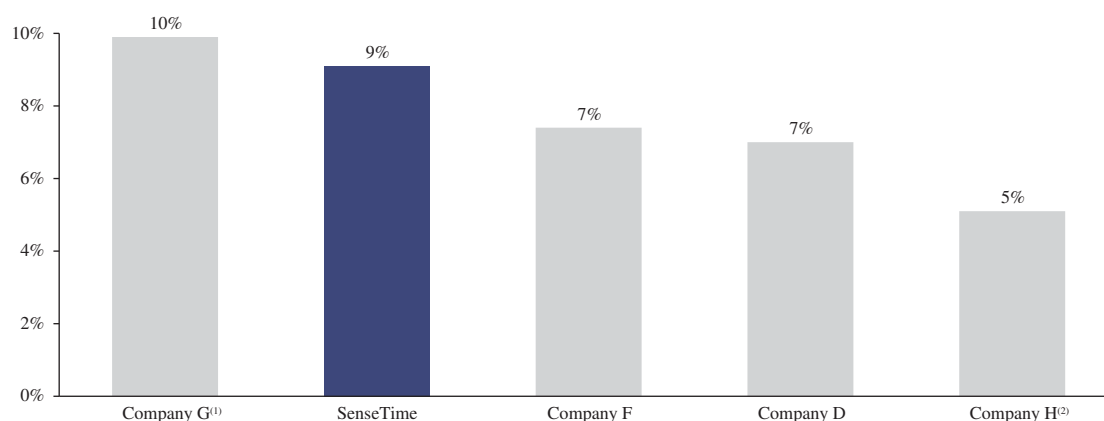
Market Size

The computer vision software market for consumer applications in China is expected to reach RMB26.8 billion in 2025, representing a CAGR of 55.0% from RMB3.0 billion in 2020, according to Frost & Sullivan.

Key Players & Market Positions

Having entered the consumer applications market since 2015, SenseTime is the second-largest computer vision software provider for consumer applications in China in terms of software revenue in 2020, according to Frost & Sullivan. The following graph shows market share of the top five computer vision software providers for consumer applications in China by software revenue in 2020.

Market Share of Computer Vision Software Providers for Consumer Application in China, 2020



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Notes:

- (1) Company G is a leading computer vision-centric software company with businesses covering consumer applications. Company G is listed on the Shanghai Stock Exchange.
- (2) Company H is a leading technology company offering Internet-related services and products in online commerce and local services, cloud services and other technologies. Company H is listed on both the New York Stock Exchange and the Stock Exchange.

COMPUTER VISION SOFTWARE FOR AUTOMOTIVE APPLICATIONS IN CHINA

The global shipment for passenger and commercial vehicles was 77 million in 2020 and is projected to reach over 100 million in 2030, according to Frost & Sullivan. China accounts for the largest share of the global automotive market, at 32.8% of global shipment for passenger and commercial vehicle shipments in 2020. This large market is undergoing revolutionary changes, as vehicles are becoming increasingly intelligent. Key changes include the development of autonomous driving technologies and the development of intelligent in-vehicle software, both of which are primarily enabled by the advancement of sophisticated AI models. These changes present massive growth opportunities. In particular, the global autonomous driving technology market is projected to reach USD110.0 billion in 2025 and further expand to USD320.0 billion in 2030. China's autonomous driving technology market is projected to reach RMB265.0 billion in 2025 and RMB618.0 billion in 2030. Specifically, the market size of China's AI-centric software for autonomous driving has reached RMB5.1 billion in 2020, at a CAGR of 63.7% from RMB0.7 billion in 2016 to 2020, and is expected to reach RMB53.0 billion in 2025, representing a CAGR of 59.9% from 2020 to 2025.

In addition to software products, automobile companies require AI-as-a-Service and cloud services to train AI models efficiently and continuously improve their autonomous driving capabilities. Cloud services are also being developed to enable vehicles to interact with their surroundings in real time, creating a safer driving environment with a higher degree of automation.

Key Trends and Drivers

According to Frost & Sullivan report, the key trends and drivers of China's computer vision software for automotive applications market include:

Wider Adoption of Autonomous Driving Technologies

Automobile companies have been making significant investments in developing Advanced Driver Assistance Systems (ADAS) globally. Up to 90% of all vehicles sold in China are expected to be equipped with L2 (ADAS) or above autonomous driving capabilities by 2030, significantly increasing from less than 9% in 2020, according to Frost & Sullivan. Up to 20% of all vehicles sold in China are expected to be equipped with L4 or above autonomous driving capabilities by 2030. Most automobile companies are looking to gradually introduce more advanced autonomous driving capabilities in their vehicle models. A number of companies are aiming directly at providing L4 or above autonomous solutions.

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Increasing Demand for Intelligent Features

Automobiles are transitioning from hardware-based to essentially software-centric “computers on wheels.” Features such as environment sensing, driver monitoring, V2X connections, in-vehicle infotainment systems are widely applied in smart/autonomous driving by utilizing AI models embedded in software platforms within the vehicles systems. Smart cabin/cockpit solutions such as driver-monitoring system and in-vehicle infotainment systems with AI-enhanced functions are being widely adopted by automobile companies in new vehicle models. Apart from hardware performance, AI-enabled intelligent features to improve user experience are increasingly becoming a key differentiation point for the vehicles offered by automobile companies.

Favorable Environment for Autonomous Driving

China is at the forefront of adopting autonomous driving technologies with a favorable environment. In combination with the growing investment in autonomous driving and the favorable policies for smart cars, China could potentially foster world-leading autonomous driving capabilities and players.

Market Size

The computer vision software market for automotive applications in China is expected to increase from RMB1.2 billion in 2020 to RMB15.3 billion in 2025, representing a CAGR of 66.4%, according to Frost & Sullivan.

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Key Players & Market Positions

SenseTime has leading capabilities in terms of ADAS, AI-driven smart cabin, AI infrastructure service capability and collaboration with Chinese and global automobile companies compared to peers, according to Frost & Sullivan. The following graph shows a comparison of core capabilities of leading software providers for autonomous driving in China.

	SenseTime	Company B	Company D	Company I ⁽¹⁾	Company J ⁽²⁾
➤ L2+ ADAS	●	●	◐	○	○
➤ L4 autonomous driving	◐	◐	◐	◐	◐
➤ Robotaxi/Robobus	◐	○	◐	●	◐
➤ AI-driven smart cabin	●	●	●	○	◐
➤ AI infrastructure service capability	●	●	●	○	○
➤ Vehicle-to-everything (V2X) System	◐	◐	◐	◐	◐
➤ Commercialization	●	◐	◐	◐	◐

- Strong capability (already at commercialization stage)
- ◐ Still developing capability (early stage of commercialization)
- No presence or very limited capability

Notes:

- (1) Company I is a leading specialized autonomous driving solutions provider with robotaxi operations in China and the United States.
- (2) Company J is a leading mobility technology platform listed on the New York Stock Exchange.

SOURCE OF INFORMATION

In connection with the Global Offering, we have engaged Frost & Sullivan to conduct a detailed analysis and prepare an industry report on the markets in which we operate. Services provided by Frost & Sullivan include market assessments, competitive benchmarking, and strategic and market planning for a variety of industries. We have agreed to a total of USD100,000 in fees and expenses for the preparation and use of the Frost & Sullivan Report. The payment of such amount was not contingent upon our successful Listing or on the results of the Frost & Sullivan Report. Except for the Frost & Sullivan Report, we did not commission any other industry report in connection with the Global Offering.

We have extracted certain information from the Frost & Sullivan Report in this section, as well as in the sections headed “Summary,” “Risk Factors,” “Business,” “Financial Information” and elsewhere in this prospectus to provide our potential investors with a more comprehensive

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presentation of the industries in which we operate. Unless otherwise noted, all of the data and forecasts contained in this section are derived from the Frost & Sullivan Report, various official government publications and other publications. During the preparation of the market research report, Frost & Sullivan performed both (i) primary research, which involved in-depth interviews with leading industry participants and industry experts; and (ii) secondary research, which involved review of company reports, independent research reports and data based on Frost & Sullivan's own research database. Projected data was obtained from historical data analysis plotted against macroeconomic data with reference to specific industry-related factors. Frost & Sullivan believes that the basic assumptions used in preparing the Frost & Sullivan Report, including those used to make future projections, are factual, correct and not misleading. Frost & Sullivan has independently analyzed the information, but the accuracy of the conclusions of its review largely relies on the accuracy of the information collected. Frost & Sullivan research may be affected by the accuracy of these assumptions and the choice of these primary and secondary sources.