This glossary of technical terms contains explanations of certain technical terms used in this prospectus. As such, these terms and their meanings may not correspond to standard industry meanings or usage of these terms.

"3D reconstruction"	the process of capturing, and reconstructing with computers, the 3D shape and appearance of real objects
"advanced driver assistance systems" or "ADAS"	electronic systems developed to automate, adapt, and enhance vehicle systems for safety and better driving
"AI"	artificial intelligence, an area of computer science that focuses on simulating human intelligence by machines
"AI data center" or "AIDC"	a data center with AI supercomputing infrastructure and a large number of GPUs, to offer pre-trained AI models and produce new AI models
"AI model"	mathematical algorithms which can take unstructured data as input and transform them into informative outputs through its "intelligence," namely, the capability of perceiving the world, transcribing and organizing information, enhancing or generating contents, or making decisions
"AI-as-a-Service" or "AIaaS"	cloud computing AI services that enable customers to produce AI models specific to their business needs with minimal expertise, efforts and investment of their own
"AI-enabled content enhancement"	content enhancement realized by AI models, through improving the quality of images and videos, and enriching content details
"AI-enabled content generation"	content generation realized by AI models, including 3D reconstruction of physical spaces, avatars and software agents, through superimposing visual content on videos with mixed reality and augmented reality
"AlexNet"	a convolutional neural network architecture, designed by Alex Krizhevsky in collaboration with Ilya Sutskever and Geoffrey Hinton in 2012
"Algorithm"	a procedure or formula for solving a problem, based on conducting a sequence of specific actions, especially by a computer
"API"	application programming interface, a computer programming approach for facilitating exchange of information and executing instructions between different computer systems

"augmented reality" or "AR"	AI technology that overlays digital content and information onto the physical world
"automatic machine learning" or "AutoML"	the process of automating the time-consuming, iterative tasks of applying machine learning to real-world problems, enabling developers with limited machine learning expertise to train high-quality models specific to their business needs
"Automotive Safety Integrity Level" or "ASIL"	a risk classification scheme defined by the ISO 26262 - Functional Safety for Road Vehicles standard
"Automotive Software Performance Improvement and Capability dEtermination" or "ASPICE"	a specialized variant of the international Standard also known as ISO/IEC 15504 (SPICE). It provides the framework for defining, implementing, and evaluating the process required for system development focused on software and system parts in the automotive industry
"avatar"	a graphical representation of a user or the user's character or persona
"CAGR"	compound annual growth rate
"carbon neutrality"	net zero carbon emissions, achieved through a transparent process of measuring emissions, reducing those emissions and offsetting residual emissions
"Class III Grade A hospital"	a hospital of the highest level in the National Health Commission's hospital classification system, with large capacity that provide high-quality professional medical services and undertake higher education and scientific research initiatives
"cloud"	a network of remote servers hosted on the Internet and used to store, manage, process data, and offer algorithms in place of local servers or personal computers
"CMOS image sensor"	an image sensor using the CMOS (complementary metal oxide semiconductor) technology
"code repository"	a data structure that stores metadata for a set of files or directory structure, including coding files
"Common Objects in Context" or "COCO"	a large-scale database that aims to enable future research for object detection, instance segmentation, image captioning, and key points detection

"computer vision"	a field of artificial intelligence that enables computers and systems to derive meaningful information from digital images, videos and other visual inputs, and take actions or make recommendations based on that information
"corner case"	an unexpected or unknown situation that occurs only outside of normal operating parameters, and is very hard to be simulated or tested
"CVPR"	Conference on Computer Vision and Pattern Recognition, an annual research conference sponsored by the IEEE
"deep learning"	a machine learning technique that constructs artificial neural networks with multiple layers to extract features from the raw input
"decision intelligence"	organizational decision-making and processes for applying machine learning at scale
"detection rate"	the proportion of correct predictions in predictions of positive class
"digital human"	a human-like software agent that interacts with users naturally and vividly through dialogues, expressions and gestures
"digital twin"	a virtual representation that serves as the real-time digital counterpart of a physical object or process
"driver monitoring system" or "DMS"	a vehicle safety system to assess the driver's identity, drowsiness, distraction, irregularities, and absence and warn the driver if needed
"dynamic range" or "DR"	the ratio between the brightest and darkest parts of an image, from pure black to brightest white
"dynamic vision sensor" or "DVS"	an imaging sensor that responds to local changes in brightness
"ECCV"	European Conference on Computer Vision, a biennial research conference
"edge"	hardware or services that brings computation and data storage closer to where the data is produced
"exaFLOPS"	one quintillion (10^{18}) floating-point operations per second

"Face Recognition Vendor Test" or "FRVT"	Face Recognition Vendor Test (FRVT) is a series of large scale independent evaluations for face recognition systems realized by the U.S. National Institute of Standards and Technology
"forward collision warning" or "FCW"	a warning that alerts the driver of an imminent collision in its forward path
"GitHub"	a code hosting platform for version control and collaboration
"GPU"	graphic processing unit
"H5"	refers to the HTML5 language and digital products developed with HTML5 language
"high beam assist" or "HBA"	recognizes oncoming vehicles at night, switching headlights between main and dipped beam automatically
"ICCV"	International Conference on Computer Vision, a biennial research conference sponsored by the IEEE
"IEC"	International Electrotechnical Commission, an organization that prepares and publishes international standards for all electrical, electronic and related technologies
"IEEE International Symposium on Mixed and Augmented Reality" or "ISMAR"	a premier conference for Augmented Reality and Mixed Reality
"IJCV"	International Journal of Computer Vision, a leading journal on computer vision
"image signal processor" or "ISP"	a method to convert an image into digital form by performing operations like noise reduction, auto exposure, autofocus, auto white balance and image sharpening designed for digital processing and image quality enhancement
"ImageNet ILSVRC"	ImageNet Large Scale Visual Recognition Challenge, which evaluates algorithms for object detection and image classification at large scale
"Institute of Electrical and Electronics Engineers" or "IEEE"	the world's largest association of technical professionals established for the advancement of technology

"in-vehicle infotainment system" or "IVI system"	a combination of vehicle systems which are used to deliver entertainment and information to the driver and the passengers through audio/ video interfaces, control elements like touch screen displays, button panel, voice commands, and more
"IO"	input and output
"IoT"	Internet of things, the extension of internet connectivity into physical devices and everyday objects
"ISO"	International Organization for Standardization, an international standard-setting body composed of representatives from various national standards organizations
"KITTI"	one of the world's largest datasets and benchmarks for computer vision research in the context of autonomous driving
"L2"	level 2 of autonomous driving, or partial automation, which assists drivers in controlling speed and steering, such as helping with stop-and-go traffic by maintaining the distance between the driver's vehicle and the vehicle in front, and providing steering assist by centering the vehicle within the lane, while still requiring drivers to have hands on the wheel and be ready to take control at any given moment
"L2+"	level 2 plus of autonomous driving, which enhances L2 driver assistance safety features, providing greater utility to drivers in all driving environments and more functions compared to L2 such as making highway entrances and exits, lane changes and merges, while the driver is still responsible for the car
"L3"	level 3 of autonomous driving, or conditional automation, which allows vehicles to drive themselves, but only under ideal conditions and with limitations, such as limited-access divided highways at a certain speed and parking lots, while drivers are still required behind the wheel
"L4"	level 4 of autonomous driving, or high automation, which allows vehicles to drive themselves without human interactions but will be restricted to known use cases, or in most environments and road conditions
"LiDAR"	light detection and ranging, a method for measuring distances by illuminating the target with laser light and measuring the reflection with a sensor
"long-tail scenarios"	scenarios that have low frequency of occurrence in real life, while in aggregate accounting for the majority of all scenarios, and the detection and proper handling of which provides huge value to the customers

"Metaverse"	refers to the convergence of physical, augmented, and virtual reality in a shared online space
"mixed reality" or "MR"	the merging of real and virtual worlds to produce new environments and visualizations, where physical and digital objects co-exist and interact in real time
"MMLab"	the CUHK Multimedia Lab, established by Prof. Tang, being one of the pioneering institutes on deep learning
"model compression"	to achieve a model that is simplified from the original without significantly diminished accuracy; A simplified model is one that is reduced in size and/or latency from the original
"natural language processing" or "NLP"	a branch of artificial intelligence that helps computers understand, interpret and manipulate human language
"OMS"	occupant monitoring system
"open-source"	a source code that is made freely available for possible modification and redistribution
"operators"	highly optimized computing routines in the context of AI computing
"over-the-air" or "OTA"	a method of wirelessly distributing an application and/or its updates to end users' devices
"perception intelligence"	supports various recognition tasks, such as image categorization, object detection, pose detection and image segmentation, from visual data as well as 3D point clouds, speech signals and natural language text
"reinforcement learning"	an area of machine learning concerned with how intelligent agents ought to take actions in an environment in order to maximize the notion of cumulative reward
"SenseAuto"	our intelligent automobile platform
"SenseAuto Cabin"	comprises the driver monitoring system (DMS), the occupant monitoring system (OMS) and the in-vehicle infotainment (IVI) system
"SenseAuto Connect"	a platform that enables one-stop management for both vehicles and their surroundings such as roadside units, pedestrians, and other vehicles using cloud and edge computing

"SenseAuto Empower"	our AI-as-a-Service products to automobile manufacturers
"SenseAuto Pilot"	covers our products and initiatives for advanced driver assistance systems
"SenseCare"	our AI software platform for smart healthcare
"SenseCare-Lung Pro"	one application of SenseCare that automatically detects pulmonary nodules and pneumonia (including COVID-19) lesions, and provides comprehensive qualitative and quantitative analysis and structured reports for radiologists
"SenseCore"	our proprietary universal AI infrastructure, that underpins the mass production of our AI models and their application to various scenarios, comprising AI infrastructure and resources at the algorithm level and computing power level
"SenseFoundry"	our AI software platform designed primarily for Smart City
"SenseFoundry-Enterprise"	our AI software platform designed primarily for Smart Business
"SenseMARS"	our platform embedded with thousands of AI models supporting perception intelligence and Mixed and Augmented Reality System (MARS)
"SenseParrots"	our proprietary deep learning training framework
"sensor"	a device, module, machine, or subsystem whose purpose is to detect events or changes in its environment and send the information to other electronics, frequently a computer processor
"Simultaneous Localization and Mapping" or "SLAM"	the computational problem of constructing or updating a map of an unknown environment while simultaneously keeping track of an agent's location within it
"software agent"	enables intelligent human machine interactions with AI multi-model interaction technologies covering speech, natural language processing, hand gesture, pose, and gaze
"SDK"	software development kit, a set of software development tools in one installable package that can be used to create and develop applications
"spatial mapping"	the process of an AR device creating a 3D map of the environment

"STPU"	SenseTime tensor processing unit, our first specialized AI chip
"super night photography"	enhanced photography application capable of capturing high-quality videos under poor light conditions
"Vehicle to everything" or "V2X"	communication between a vehicle and any object, such as road, traffic lights and roadside signals that may affect, or may be affected by, the vehicle
"virtual reality" or "VR"	the computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors