# AIoT and its Applications

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**Abstract:**

Through several waves of ups and downs in the past decades, artificial intelligence (AI) has evolved into a must-have new technology or tool in various domains. Furthermore, with the advent of powerful GPU, AI-related research or AI-based applications have sprouted in every corner of the world. Originating from pure network connectivity, the Internet of Things (IoT) has become a structure that can collect every piece of data from physical devices, daily activities, images, or videos into a data reservoir. As a result, tons of data are automatically generated into an enterprise database in a single day. This creates research opportunities on integrating AI, IoT, big data, and cloud or edge computing, to improve the quality of industrial production or medical service.

Applications of AI algorithms, fuzzy modeling, and/or intelligent systems play important roles and can be found everywhere, including widespread usage in industry and medical systems for tasks such as locating and detecting scratches or defects in product surface, printed circuit board manufacturing, monitoring rehabilitation progress for patients with Parkinson's disease or stroke, autonomous moving and planning of service robots in healthcare, and short-term or long-term prediction of air quality in certain areas. Furthermore, AI can be integrated with other techniques, such as Internet of things, fuzzy modeling, and edge computing to become powerful tools for industry and medicine domains. This talk will address from the AIoT and system engineering perspective for applications faced in industry.