While most people are still staying in the concept that driving vehicle is inseparable from the driver and think autonomous driving just exists in science fiction movies, self-driving technology is no longer futuristic and a great change is coming. In February 2020, the National Development and Reform Commission and 11 other ministries jointly issued the Intelligent Vehicle Innovation and Development Strategy, which proposed the vision of realizing the large-scale production of conditional intelligent driving vehicles (L3 level) by 2025, and pointed out that the research of AI should be further strengthened in order to achieve faster development of autonomous driving technology. In fact, with the rapid development of AI in recent years, automobile enterprises have gradually shifted their research focus on automatic drive. Internet giant Baidu announced a joint venture with Geely Auto to form a smart car company in January 2021. The advancement of autonomous driving is entirely dependent on AI technology. In the theoretical process of autonomous driving, no matter the perception of the surrounding environment, decision planning or control execution, control of AI is indispensable. To ensure the safety under automatic control of the machine, AI has to own an advanced sensor system to avoid risks in time. There is good news that all of these are getting better and better.

Thus,this paper aims to shorten the gap by providing a comprehensive survey of key studies in this research avenue.

人工智能与其他新兴技术结合使用的潜在机会

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