**Essay Outline**

**Introduction**

From machine learning to deep learning, AI is rapidly evolving. At the same time, image recognition, sensors, intelligent judgment algorithms continue to progress. As a result, the groundwork for driverless cars, once the stuff of science fiction, is already in place. From the national, social and enterprise levels, artificial intelligence is a hot issue. In these contexts, this paper aims to introduce the influence of artificial intelligence on the development of automatic driving technology and its specific application, and appropriately explore its future possibility. In fact, 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. At the same time, on the most critical level - safety, compared with human driving vehicles, the control of artificial intelligence has no emotion, which will make the control more accurate and ensure safety. In other ways, the combination of artificial intelligence and other technologies will create more possibilities. From a macro perspective, the automatic driving market has not been fully explored, artificial intelligence is constantly improving, and the prospect of automatic driving is very good.. (thesis statement)

**Main Body**

*Argument 1*

self-driving technology is no longer futuristic and a great change is coming. (topic sentence)

( detail / example / explanation)

1. 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. (first point)
2. 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. (second point)
3. Yifang Ma,Zhenyu Wang,Hong Yang,Lin Yang.Artificial Intelligence Applications in the Development of Autonomous Vehicles:A Survey[J].IEEE/CAA Journal of Automatica Sinica,2020,7(02):315-329.

*Argument 2*

The advancement of autonomous driving is entirely dependent on AI technology. (topic sentence)

( detail / example / explanation)

1. With the help of various advanced sensors, the car reads the information of the surrounding environment (first point)
2. When planning action, various algorithms of artificial intelligence, especially advanced deep learning such as convolutional neural network, play a very key role (second point)
3. When controlling action, AI connects software and hardware to ensure the accuracy of operation (third point)

*Source:*

1.Yifang Ma,Zhenyu Wang,Hong Yang,Lin Yang.Artificial Intelligence Applications in the Development of Autonomous Vehicles:A Survey[J].IEEE/CAA Journal of Automatica Sinica,2020,7(02):315-329.

2.Lapsiya Y, Jain D, Shah P, Kachare A. Analysis Of Various Object Detection Techniques for Self-Driving Cars. 2021 Asian Conference on Innovation in Technology (ASIANCON), Innovation in Technology (ASIANCON), 2021 Asian Conference on. August 2021:1-6. doi:10.1109/ASIANCON51346.2021.9545034

*Argument 3*

The importance of artificial intelligence is also reflected in its safety guarantee in the process of automatic driving. (topic sentence)

( detail / example / explanation)

1. In terms of detail control, there is no doubt that the machine can do better (first point)
2. Through the connection of artificial intelligence, the transportation department can achieve the purpose of vehicle road coordination (second point)

*Source:*

1. Al Barghuthi NB, Said H. Readiness, Safety, and Privacy on Adopting Autonomous Vehicle Technology: UAE Case Study. 2019 Sixth HCT Information Technology Trends (ITT), HCT Information Technology Trends (ITT), 2019 Sixth. November 2019:47-52. doi:10.1109/ITT48889.2019.9075090
2. Kim J. A Study on the Development of Traffic Safety Risk Information Sharing Technology through Vehicle-Road Cooperation. 2021 IEEE International Conference on Consumer Electronics (ICCE), Consumer Electronics (ICCE), 2021 IEEE International Conference on. January 2021:1-3. doi:10.1109/ICCE50685.2021.9427671

*Argument 4*

The combination of artificial intelligence and other emerging technologies may play an unexpected role in promoting the development of automatic driving. (topic sentence)

( detail / example / explanation)

1. AI may play a role in the construction of new models (first point)

Source:

1. Hua Ding,Jianwei Wang,Wenqiang Liao,Ting Liang,Hong Dai.Site selection of self-driving and recreational vehicle camps in China:An investigation using analytic hierarchy process and entropy[J].Journal of Traffic and Transportation Engineering(English Edition),2021,8(05):762-777.

**Conclusion**

Generally speaking, the background of the times requires the rapid development of automatic driving. At the same time, the rapid development of artificial intelligence can turn this demand into reality. From all aspects, it is gradually moving towards the center of the transportation development stage. Please look forward to its future. (restate the thesis statement)