### ****Title:****

### **The History of Computer Development: from Punch Card to Artificial Intelligence**

### ****Introduction:****

### **Computers have become an essential part of our daily life and work. The invention and advancement of computers have not only changed the way we think and solve problems, but also led the development of society. Computers have gone through multiple periods of change and improvement since their inception.**

### **This paper aims to introduce the history of computer development from the initial stage of punch cards and vacuum tube computers to the latest technologies such as microprocessors and artificial intelligence. We dedicate our efforts to studying the history of computers, not only because it helps us better understand the cause-effect relationship of today's prosperous field of computer science, but also because a comprehensive understanding of computer development challenges will do a great favor in predicting the future of computer technology and coping with new opportunities and challenges.**

### **Our main purpose is to explore the impact of computers on human infrastructure and social structures based on the history of computer development, to better understand the evolution of computer science, and to provide inspiration and guidance for future research.**

### ****Thesis statement:****

### **This paper aims to comprehensively introduce the history of computer development, analyze their impact on human infrastructure and social structures, and provide insights for the future trends of computer science and technology.**

## ****Body paragraph1:****

**Topic sentence：The origins of computers and the first generation of computers**

**Support details:**

1. **Charles Babbage, a British computer pioneer, designed machines that could perform mathematical calculations automatically, and even wrote his classic 1842 book, "The Warp and Weft of the Analytical Engine", describing how they would work.**
2. **Punched card is a medium that can store data or information. Its principle is to store and read information by punching holes in the card.**
3. **Electron tube computer, which uses electron tube as switching element**

**and logic unit, can realize data processing and logic operation.**

## ****Body paragraph2:****

**Topic sentence：Second - and third-generation computers**

**Support details:**

1. **The birth of the transistor computer changed the history of computing, enabling large-scale applications in business and high technology, and driving the personalization of computing**
2. **The integrated circuit computer has led to the personalization and popularization of the computer. Thus, computer became a universal technology and began to penetrate into people's life and work.**

## ****Body paragraph3:****

**Topic sentence：Fourth generation and contemporary computers**

**Support details:**

1. **The main advantages of microprocessor computers include: small size, low power consumption, flexible operation, high reliability, low cost, etc. These advantages make the microprocessor computer widely used in various fields, including home entertainment, business, education, medical and so on.**
2. **World Wide web**

## ****Body paragraph4:****

**Topic sentence：the future development trend of computer technology**

**Support details:supercomputers, smart home**

**Source:**

1. **<https://www.museum.uestc.edu.cn/info/1184/2336.htm>**
2. **"A Brief History of Computer Science"，作者：Gerard J. Holzmann，出处：IEEE Micro，Vol. 33, No. 4, July-August 2013。**
3. **"A Brief History of Computers"，作者：John P. Campbell，出处：IEEE Annals of the History of Computing，Vol. 22, No. 3, July-September 2000。**
4. **"The Evolution of Computers"，作者：Todd C. Davis，出处：Journal of Computing Sciences in Colleges，Vol. 21, No. 6, June 2006。**
5. **"A History of Computer Science in the United States"，作者：John Impagliazzo，出处：ACM Computing Surveys，Vol. 31, No. 3, September 1999。**

**Conclusion:**

**In conclusion, this paper introduces the development of computer from punched cards to artificial intelligence. The development of computer in the field of science and technology and industry has profoundly influenced the development of all aspects of human society and rapidly changed People's Daily life and work. We cover the blueprint of computing from punched cards and early vacuum tube computers to the latest technologies such as transistors, microprocessors and artificial intelligence. We believe that computer technology has made outstanding contributions to the development of human society. At the same time, this paper also discusses the future development trend of computer technology, including supercomputers, smart home, etc., these developments will bring more profound changes to the way people live and work. In the future research, we need to pay attention to the frontiers and applications of various technologies, hoping to contribute to the future of computer science and technology.**