Historyof AI With so much attention on modern artificial intelligence, it is easy to forget that the field is not brand new. AI has had a number of different periods, distinguished by whether the focus was on proving logical theorems or trying to mimic human thought via neurology. Artificial intelligence dates back to the late 1940s when computer pioneers like Alan Turing and John von Neumann first started examining how machines could "think." However, a significant milestone in AI occurred in 1956 when researchers proved that a machine could solve any problem if it were allowed to use an unlimited amount of memory. The result was a program called the General Problem Solver (GPS). Over the next two decades, research efforts focused on applying artificial intelligence to real-world problems. This development led to expert systems, which allow machines to learn from experience and make predictions based on gathered data. Expert systems aren't as complex as human brains, but they can be trained to identify patterns and make decisions based on that data. They're commonly used in medicine and manufacturing today. A second major milestone came in 1965 with the development of programs like Shakey the robot and ELIZA, which automated simple conversations between humans and machines. These early programs paved the way for more advanced speech recognition technology, eventually leading to Siri and Alexa. The initial surge of excitement around artificial intelligence lasted about ten years. It led to significant advances in programming language design, theorem proving, and robotics. But it also provoked a backlash against over-hyped claims that had been made for the field, and funding was cut back sharply around 1974. After a decade without much progress, interest revived in the late 1980s. This revival was primarily driven by reports that machines were becoming better than humans at "narrow" tasks like playing checkers or chess and advances in computer vision and speech recognition. This time, the emphasis was on building systems that could understand and learn from real-world data with less human intervention. These developments continued slowly until 1992, when interest began to increase again. First, technological advances in computing power and information storage helped boost interest in research on artificial intelligence. Then, in the mid-1990s, another major boom was driven by considerable advances in computer hardware that had taken place since the early 1980s. The result has been dramatic improvements in performance on several significant benchmark problems, such as image recognition, where machines are now almost as good as humans at some tasks. The early years of the 21st century was a period of significant progress in artificial intelligence. The first major advance was the development of the self-learning neural network. By 2001, its performance had already surpassed human beings in many specific areas, such as object classification and machine translation. Over the next few years, researchers improved its performance across a range of tasks, thanks to improvements in the underlying technologies. The second significant advancement in this period was the development of generative model-based reinforcement learning algorithms. Generative models can generate novel examples from a given class, which helps learn complex behaviors from very little data. For example, they can be used to learn how to control a car from only 20 minutes of driving experience. In addition to these two advances, there have been several other significant developments in AI over the past decade. There has been an increasing emphasis on using deep neural networks for computer vision tasks, such as object recognition and scene understanding. There has also been an increased focus on using machine learning tools for natural language processing tasks such as information

extraction and question answering. Finally, there has been a growing interest in using these same tools for speech recognition tasks like automatic speech recognition (ASR) and speaker identification (SID). AI has various applications in E-commerce, particularly in providing personalized recommendations to customers. These recommendations are tailored based on the customer's browsing history, preferences, interests, and even the purchasing behavior of other customers with similar tastes. Additionally, virtual shopping assistants and chatbots can enhance the user experience, and as natural language processing advances, they will eventually be capable of engaging with customers in real-time.ii