

3.5: Summary

Chapter 3 focuses on software, which provides the intelligence and instructions that enable hardware to function. Software is categorized as system software like operating systems, utility programs, and application software. Operating systems manage hardware resources and provide a platform for applications. Utilities like antivirus software maintain system health. Artificial Intelligence software is an emerging software that can improve people's productivity. Application software is designed to meet a specific goal. Productivity software is a subset of application software that provides basic business functionality to a personal computer: word processing, spreadsheets, and presentations. An ERP system is a software application with a centralized database that is implemented across the entire organization. ERP and CRM systems integrate business processes and data to help run the organization.

The rise of AI-powered large language models has led us into uncharted territory, where new content created by AI is becoming increasingly prevalent. Although these models are imperfect at this early stage, they can still be both useful and harmful. On one hand, they can assist people with faster research and content creation, such as in marketing and education. However, on the other hand, they can also be harmful, as these models can hallucinate and provide incorrect answers.

Another software delivery model is cloud computing, which provides services over the internet rather than installing locally. While convenient, it raises security and privacy concerns. Virtualization software enables providers to allocate resources efficiently in the cloud. Software is created through programming languages that are compiled into executable instructions. Development follows formal methodologies and can be done through open source or closed source models. The software can be an open-source or a closed-source model, and users or developers are granted different licensing terms.

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