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6-1 Journal:

Emerging Technology and Artifact

Two emerging and groundbreaking technologies of interest are (APIs) Application Programming Interfaces  and (AR) Augmented Reality.

An API is a powerful tool that facilitates controlled interaction between different software programs utilized by a business. Essentially, it enables developers and software packages to integrate with a unified system, providing the advantage of seamless connection with other systems and giving companies control over their systems. Developers can utilize APIs to access the code information of an existing app through a key. This action is known as an API call, and the data returned is called a response. Once the developer receives this data, they can integrate it in a format they are familiar with.

Augmented Reality (AR) enhances real-world environments with computer-generated sensory information, such as visual, auditory, haptic, somatosensory, and olfactory elements, providing an interactive experience. It proved to be exceptionally beneficial during the COVID-19 pandemic by facilitating remote problem-solving for field workers. Moreover, AR technologies can assist IoT-enabled systems with heads-up displays and provide comprehensive step-by-step instructions and documentation for a range of tasks.

The impact of these emerging technologies on my career is significant, as numerous companies have already integrated them into their operations. Therefore, it is crucial to comprehend their functionality and possess the ability to develop and deploy them. This technology has a profound effect on individuals, communities, and the world, enhancing the interconnectedness among people. I have completed my final enhancements and intend to upload them to my ePortfolio this week.

I have made significant improvements to the software design of the appointment scheduling application by adopting structured programming practices and encapsulating functionalities within the AppointmentService class. This organization has made it easier to manage the related elements of the application. The use of a vector to store appointments allows for dynamic resizing, improving memory management and access time. I have also implemented basic algorithms for input validation and searching for appointments using iterators, enhancing the efficiency of data retrieval. The application persists appointment data in a CSV file, providing a simple yet effective database solution. I have established robust I/O operations to save and load appointments, ensuring data integrity and reliability across sessions. Further considerations for scalability may involve transitioning to a more structured database system in future iterations.