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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.

The Application Programming Interface (API) is a powerful tool that enables a business to interface in a regulated manner with the various software products that it uses. In essence, it makes it possible for software packages and developers to interface with a unified system. This offers the benefit of a seamless connection with other systems and provides businesses with control over their own systems. Through the use of an API, developers are able to gain access to the code information of an existing application by use of a key. This particular activity is referred to as an API call, and the data that is returned is referred to as a response. Following the receipt of this data by the developer, they will be able to include it in a manner that is known to them.

Augmented reality (AR) is a technology that enhances real-world environments by incorporating computer-generated sensory information. This information includes aspects that are visual, aural, haptic, somatosensory, and olfactory. This technology also provides an interactive experience. Because it made it easier for field personnel to solve problems remotely during the COVID-19 pandemic, it proved to be an extremely useful tool. Additionally, augmented reality technologies have the capability to deliver heads-up displays to Internet of Things (IoT) enabled systems, as well as full step-by-step instructions and documentation for a variety of tasks.

Due to the fact that a great number of businesses have already incorporated these emerging technologies into their operations, the impact that they have had on my professional life has been tremendous. As a result, it is of the utmost importance to have a solid understanding of their functionality as well as the capacity to create and implement them. By increasing the degree to which people are connected to one another, this technology has a significant impact not only on individuals but also on communities and the entire world. I have finished the last of my upgrades, and I plan to post them to my electronic portfolio this week.

Through the implementation of structured programming practices and the encapsulation of functionalities within the AppointmentService class, I have made major changes to the software design of the application that is used for scheduling appointments. The management of the application's components that are related has become less difficult as a result of this organization. Using a vector to hold appointments enables dynamic scaling, which reduces the amount of time needed to access the information and improves memory management. In addition, I have built fundamental algorithms for the validation of input and the search for appointments by utilizing iterators, which has resulted in an increase in the effectiveness of data retrieval. A database solution that is both straightforward and efficient is provided by the program, which stores appointment information in a CSV file. Strong input/output processes have been built by me in order to store and load appointments, so guaranteeing the integrity of the data and the reliability of the sessions. It is possible that in subsequent stages, the shift to a database system that is more structured will be one of the additional considerations for scalability.