**Software Design and Engineering Narrative**

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During my computer science journey, I have had the opportunity to work on several different projects that have enhanced my technological skills. A particular project that I wanted to better enhance, and further perfect was ‘My Calendar Application’. This artifact was the very first application I ever created with my current employer, whom I have been employed with for 5 years. As the name indicates, this is an application set to tell time in the form of a calendar. It shows the current day, followed by the days of the week, the month and includes padding days, which are any additional days from the previous month. This application was meant to enhance my knowledge specifically in HTML, CSS, and JavaScript.

This artifact in my ePortfolio was a reminder of how far I have grown as a developer. I started my computer science journey with minimal knowledge in computer coding and created ‘My Calendar Application’ with fundamental knowledge. As I am translating this application from HTML, CSS and JavaScript to a more dynamic framework like React, this allows my proficiencies to be showcased.

Previously, ‘My Calendar Application’ had minor functionality errors related to its JavaScript. The loop functions permitted the application to report only the current year. Additionally, the application was undeveloped, simple, and did not allow users to click on any dates or schedule any events. Within this week, I have focused on using React as the framework. Previously the HTML file included code that would be displayed on the UI (user interface), but since has completely changed. The HTML currently has minimal code and serves as a way to connect the root component, called App, to the rest of the application. The CSS file has also been updated, it reflects a similar style as the original application, however this new updated version includes more extravagant colors, fonts, and a different formatting structure for the calendar. The last programming language to be updated was JavaScript. The new calendar application contains a root component called App and two additional components: one for the calendar heading and the other for the day. This contains an index.jsx file that renders the App component with the ‘root’ id, allowing the HTML file to display the application on the UI. I’ve included two modals, which allow a user to create and delete an event, expanding the application’s software development.

My original goals have been met by translating the artifact into the React framework and expanding the design and functionality. I learned how to implement a framework, which taught me how to use code and place it within an application. I learned about components, which are like JavaScript functions except help to sort the code because they “let you split the UI into independent, reusable pieces, and think about each piece in isolation” (Anderson, 2021). I learned about hooks, which I had no previous knowledge, that hooks are a new addition within React 16.8. “They let you use state and other React features without writing a class.” (Anderson, 2021). Hooks were helpful features when working on this project. Throughout the application, I used the feature ‘useState’ to declare variables and set them equal to an array with its current value and changing value. I learned how to add event modals to my project, which I used react state and props to pass data between components.

My biggest challenge, throughout this week, was learning how to apply the React framework and deciding what components and hooks to use for the application. Being able to enhance the artifact allowed me to see how my proficiencies have grown and expanded my knowledge on skills that are in high demand like ‘React’. Five years ago, I wouldn’t have known how to enhance my project and would have needed a lot of additional assistance from the internet. I still reference Google or YouTube for assistance; however, my coding skills have improved. I understand more technology terminology and I can read through my code and understand it. I can code different features without referencing them like ‘useState’ and ‘useEffect’. I can recognize the different coding languages like JavaScript, C++, and Python as well as the different frameworks like React and Angular.

Expanding on this project has allowed me to continue practicing and evolving my software development skills. I have selected this artifact for my ePortfolio to showcase and portray an accurate picture of myself and my skills, thus far, attained.

# Works Cited

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