

Student's Name

Professor's Name

Course

Date

### **Fall 2022 Semester: Developing Large Complex Software Systems**

The fall 2022 semester involves software engineers developing complex software systems. The semester's theme is "Applications Employing Data from Millions of Sources." According to one of the given constraints, hundreds of millions of airplane flights cross the United States every year. If 1% of these airplanes is set to monitor and give reports concerning solar radiation, air quality and ozone levels can be closely forecasted. In the following essay, the constraint of weather forecasting is covered.

#### **An application of real-time weather forecasting**

The application of real-time weather forecasting is suitable for third-year CSE students as a mini-project or for students in the last year of their Computer Science programs as a final project because of its very simple web development and programming requirements. The app's primary function is to serve as a web-based weather service that provides accurate, up-to-the-moment information on the weather in a given place, including things like the current temperature and the likelihood of precipitation (Crawley & Hosoi). The app can also tell one whether it is going to be overcast, sunny, or raining outside. If one wants to test their programming abilities, creating weather-predicting software is the way to go. A solid understanding of HTML, CSS, and JavaScript is required to design a weather forecasting app (Crawley & Hosoi). Knowing Node.js and express technologies well is crucial for delivering

optimal back-end performance. Accessing weather data from other sources and displaying it in your app requires knowledge of API calls.

In conclusion, the application of real-time weather forecasting will be built to help curb the weather constraint. The user experience will be maximized when an input text box is provided for them to type in the desired location for which weather data is required. The weather report for the specified area must appear immediately when the search button is clicked.

Work Cited

Crawley, Edward F., and Anette E. Hosoi. "Moving Forward with the New Engineering Education Transformation (NEET) program at MIT-Building community, developing projects, and connecting with industry." (2019).