

FLORIDA INTERNATIONAL UNIVERSITY



Weather App

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Background

Introduction



- Unpredictable weather conditions can significantly affect daily plans and decisions, such as canceling trips, postponing outdoor activities, or deciding what to wear
- Our team aimed to create a weather app that provides real-time, accurate weather updates to help users plan accordingly

Purpose of New System

Current System

- Often ask the user to pay extra or subscribe
- Some have advertisements
- Difficult to navigate

New System

- Reliable
- Easy to use
- Accurate
- Ad-free
- No cost

Requirements

Application Programming Interface (API)

API of choice:

- OpenWeather



Why we chose this one:

- It is simple to use
- It is free (paid versions also exist)
- Has a variety of useful information despite being free.



Sweetwater, US

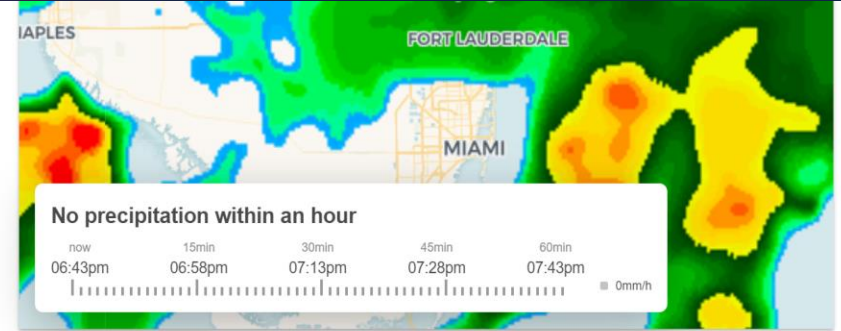
27°C

Feels like 30°C. Broken clouds. Light breeze

3.1m/s NE 1017hPa

Humidity: 87% UV: 0

Dew point: 25°C Visibility: 10.0km



<https://openweathermap.org/>

Today

Hourly

10 Day

Weekend

Monthly

Radar

Video

More Forecasts

Miami, FL As of 3:02 pm EDT

88°

Partly Cloudy

Day 89° • Night 82°



Watch: Heavy Rain Ahead From Texas To Maine

Anxious? Pet A Llama



<https://weather.com/weather/today/l/76dab4c93a0c782c9cfc134f7f1ec07d1c9bd1044c67d81a025196c66f5f1285>

Integrated Development Environment (IDE)

IDE Chosen:

- Visual Studio Code

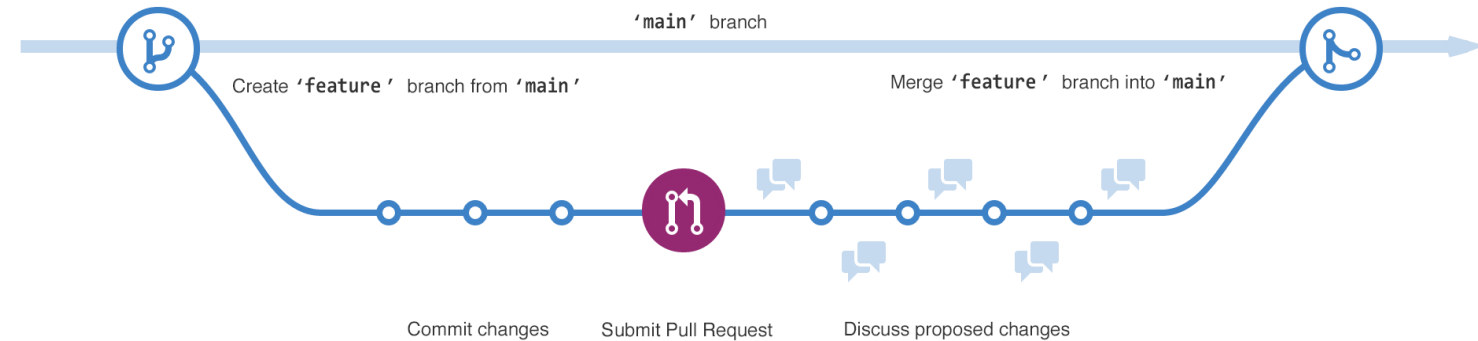


Why we chose it:

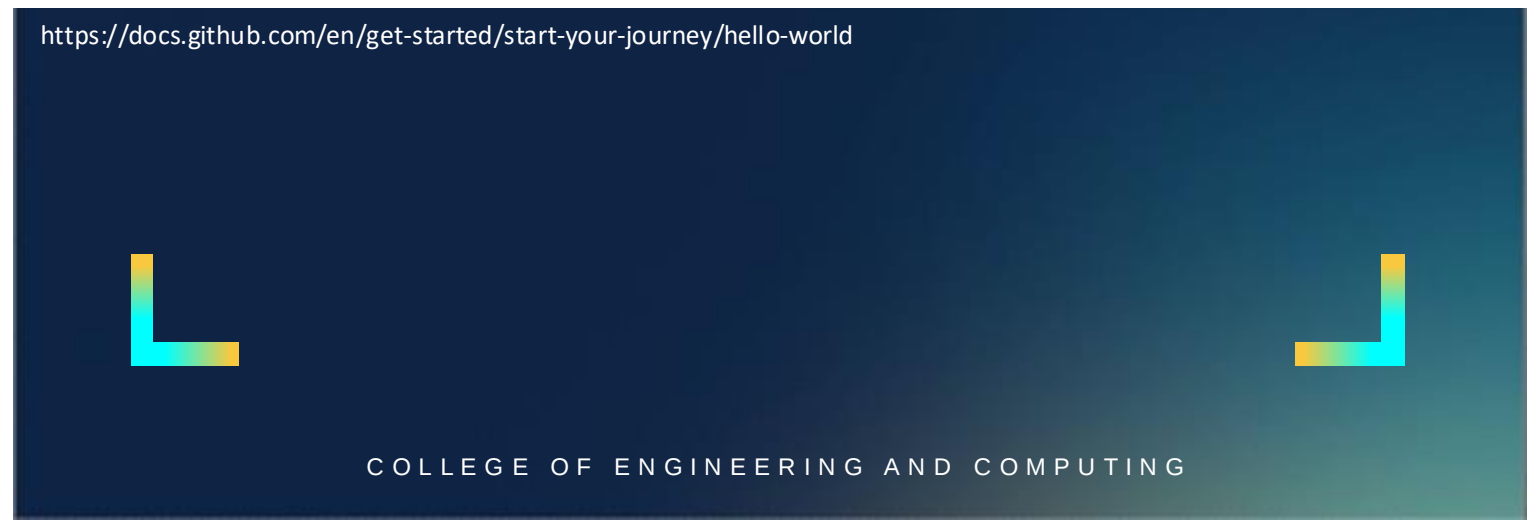
- Familiarity
- Ease of use
- Ability to work with GitHub

• Brief description of GitHub

- Branches
- Cloning
- Merging

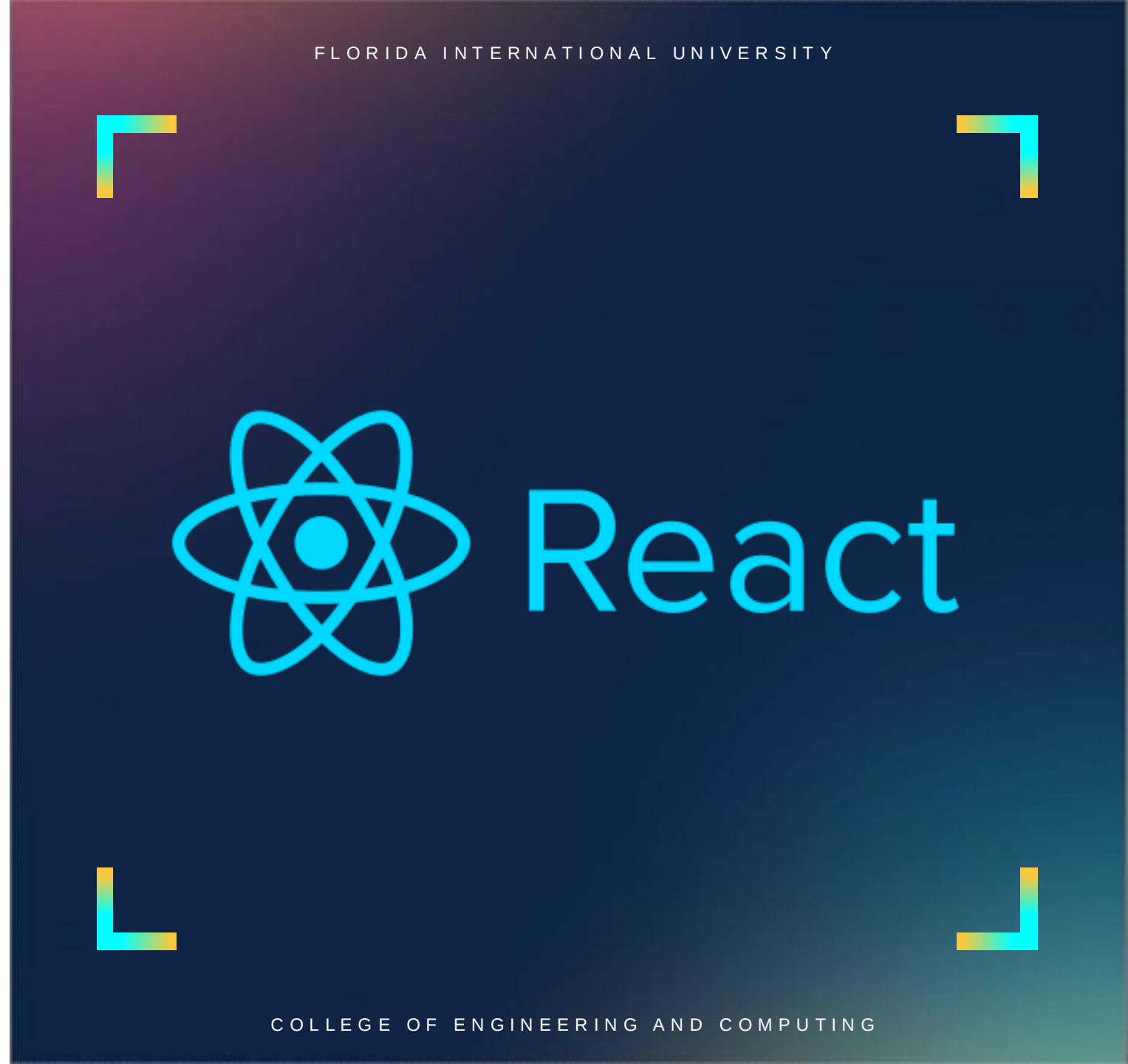


<https://docs.github.com/en/get-started/start-your-journey/hello-world>



User Interface (UI): React

- Reusable Components
 - Build once, use everywhere
- Fast Updates
 - Smooth, real-time weather data
- Strong Support
 - Lots of resources and help
- Easy Styling
 - Integrates well with design tools
- Simple Code
 - Easy to write and maintain
- Proven Technology
 - Trusted by many big projects



Programming Languages

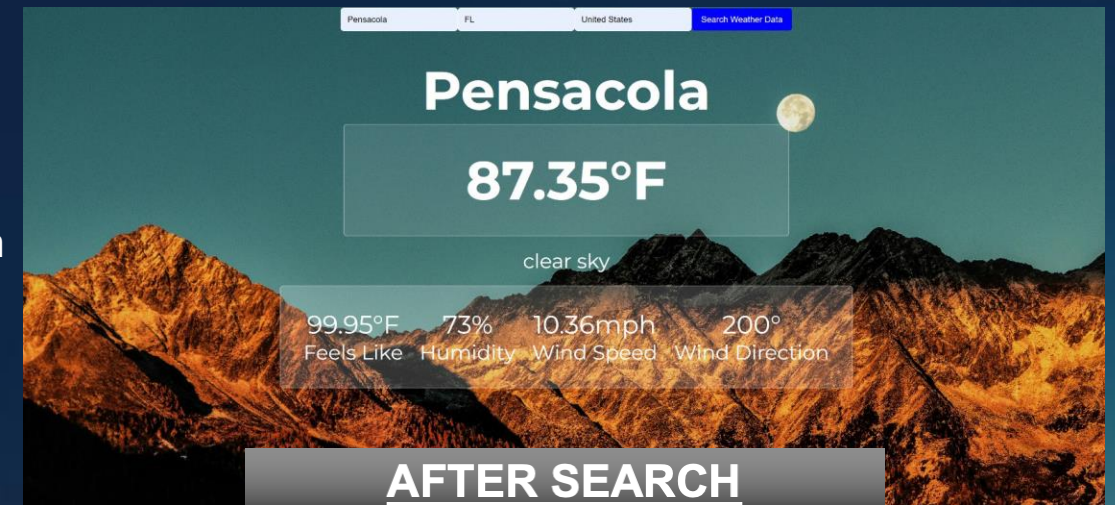
- JavaScript: Essential for creating interactive and dynamic web pages
- CSS: Controls the visual presentation of web pages, enabling flexible and responsive designs.
- HTML: Provides the essential structure and content layout for web pages.



Implementation

Front-End

- Implemented CSS and HTML
- Prioritized the structure, content, and layout of the application with the built-in react “index.css” and “App.js” files
- App.js maintained the display of the website, using HTML to organize the sections of the app
- Placed the search mechanism and inputting the proper API data in each section specified (“Display”)
- After completion, “index.css” served to properly move the sections made in “App.js” into their proper place
- Cleaned up their size, color, and orientation



API Implementation

- **API Name:**
OpenWeatherMap API
- **Purpose:** To fetch real-time weather data for any location.
- **Data Provided:**
 - Current weather conditions
 - Temperature
 - Humidity
 - Wind speed
 - Weather descriptions

```
const getWeather = async (event) => {
  event.preventDefault();
  const apiKey = process.env.REACT_APP_WEATHER_API_KEY;

  if (!country || !city) {
    alert("Enter a city name and Country code (eg. US,UK)");
    return;
  }

  try {
    const query = state
      ? `${city},${state},${country}`
      : `${city},${country}`;

    const fetch = await axios.get(
      `https://api.openweathermap.org/data/2.5/weather?q=${query}&appid=${apiKey}`
    );
    setWeatherInfo(fetch.data);
  } catch (error) {
    alert("Could not retrieve any weather data for that location.");
  }
};
```

Demo

Summary

- Our real-time weather forecast website provides reliable, up-to-date weather information.
- Built with React, JavaScript, CSS, and HTML in Visual Studio Code.
- Utilizes the OpenWeather API for accurate data.
- Empowers users to make informed decisions and plan their activities confidently.

Thank you!

Any Questions?