

# **Weather Adventures**

## **User Documentation**

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### **1. User Documentation Revision History**

Date	Author	Description
03/09/2023	AR	Created Initial Version
03/12/2023	JL	Updated format structure
03/12/2023	All	Turned In Final Version for Project 2 Final Project Assignment on Canvas.

### **2. Weather Adventures Program Overview**

The Weather Adventures system is a tool designed for people who enjoy participating in outdoor activities across Lane County within Oregon with the ability to focus in on Eugene, Oregon as well. Weather Adventures provides an interactable map of Lane County that zooms in to be a view of Eugene and it can zoom out from Eugene to be a view of Lane County. Each map is structured as a grid composed of square areas with Lane County being 2x2 and Eugene being 5x3. You can toggle between different icon display options that indicate weather conditions through specific precipitation or wind direction through arrows; these icons would be placed in the center of each square area of the current map.

Afterwards, you can click a specific square on the map to learn about the specific outdoor activities and weather conditions of that area. The system will display a pop-up window that provides the specific weather conditions of the area and recommended outdoor activities based on the requested area's weather conditions. For the specific weather condition, the window will provide the temperature, conditions such as clear skies or rain, wind speed, wind direction, visibility, and humidity. With each outdoor activity, the name, description, and difficulty, will be provided. The activity descriptions will also each include a button to access its website by opening a web browser page to its website. After you are done with the pop-up window, you can exit it out at the top right corner to continue viewing other areas of Eugene and Lane County.

### **3. Running Weather Adventures**

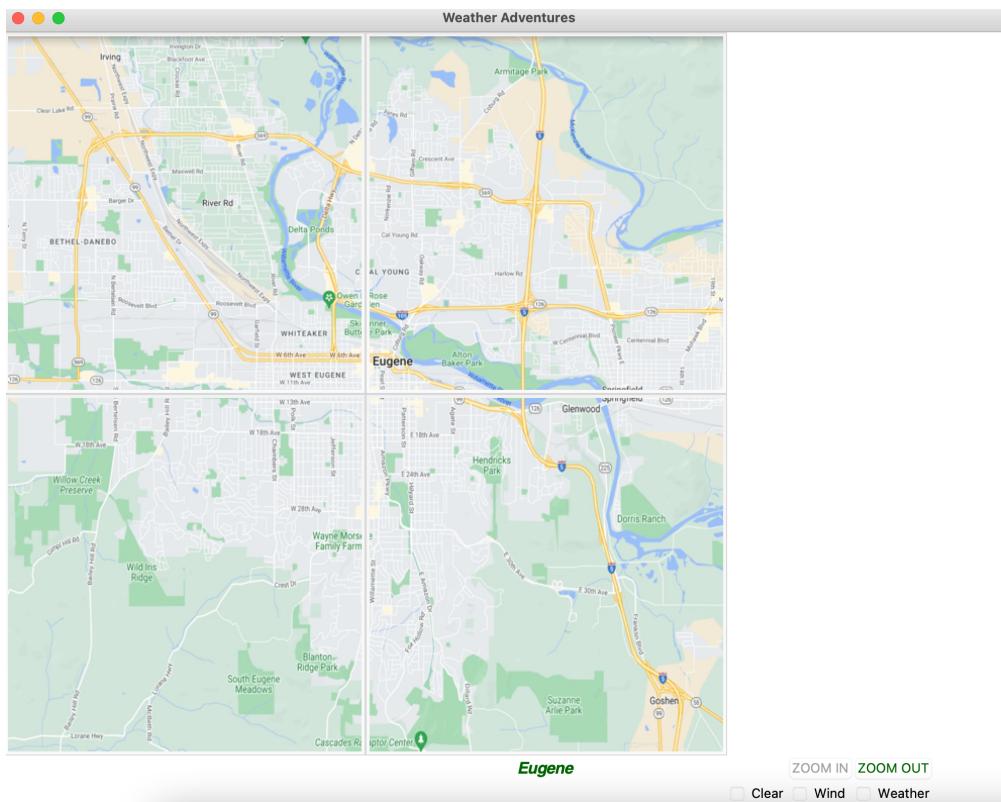
For installing Weather Adventures, please see the installation instructions named as [Installation\\_Instruction.pdf](#).

To run Weather Adventures, you must open the terminal, type in “python3 Weather\_Adventures.py”, then press enter to start it.

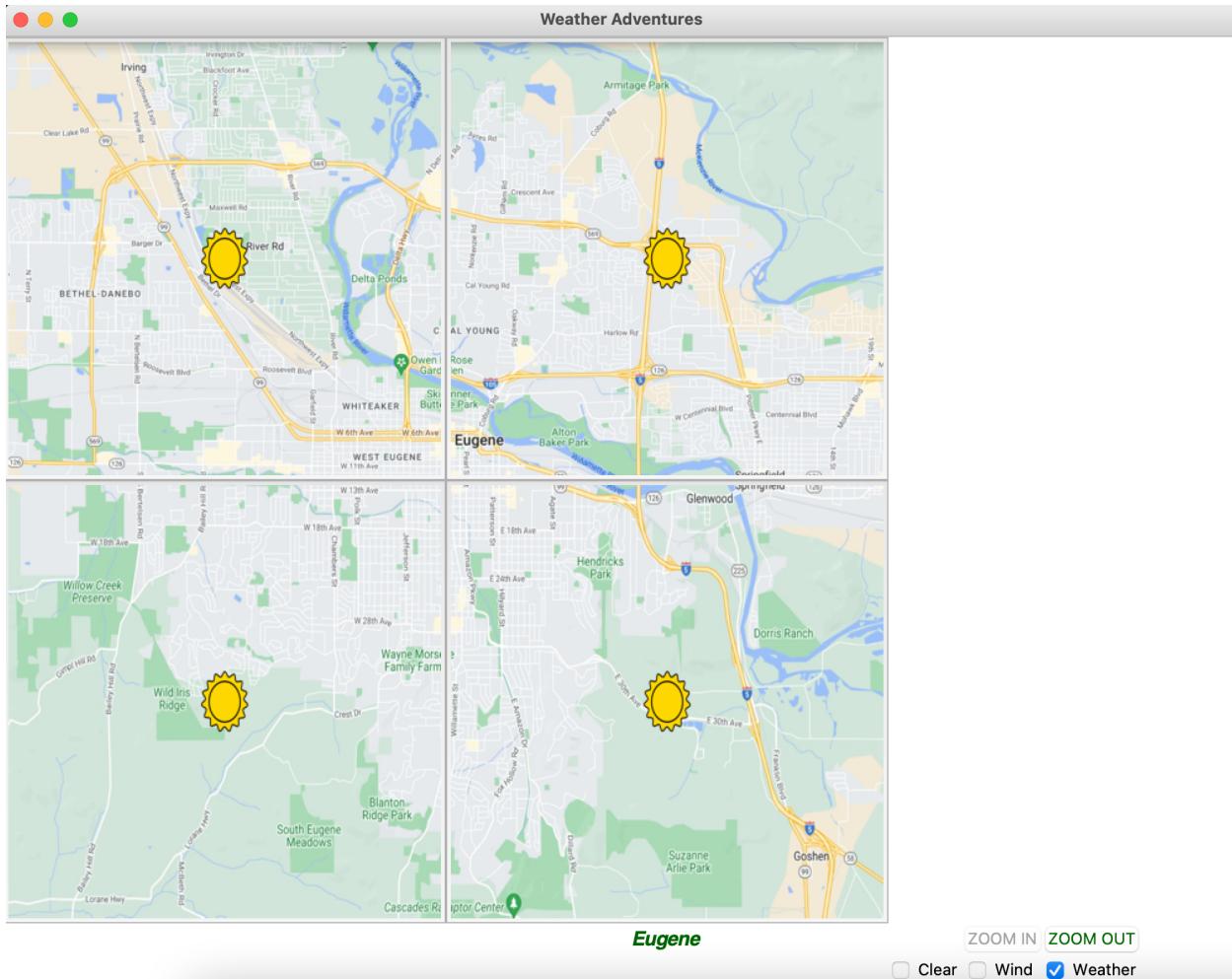
After the start up, you are faced with a message on the command line indicating that the map images are being initialized. The exact message consisting of the first two lines is listed below and the third line will appear once the map images are initialized. The application should open in less than 20 seconds.

```
Welcome to Weather Adventures!
We are initializing the maps. This will take a moment. Thank you for your patience!
Map is initialized! Opening the application now.
```

Once all the maps have been initialized with the weather information, the graphic user interface (GUI) will open. The GUI opens to display a map of Eugene, Oregon with neither weather or wind icons overlaid over the map images by default. The image below shows the initial map.

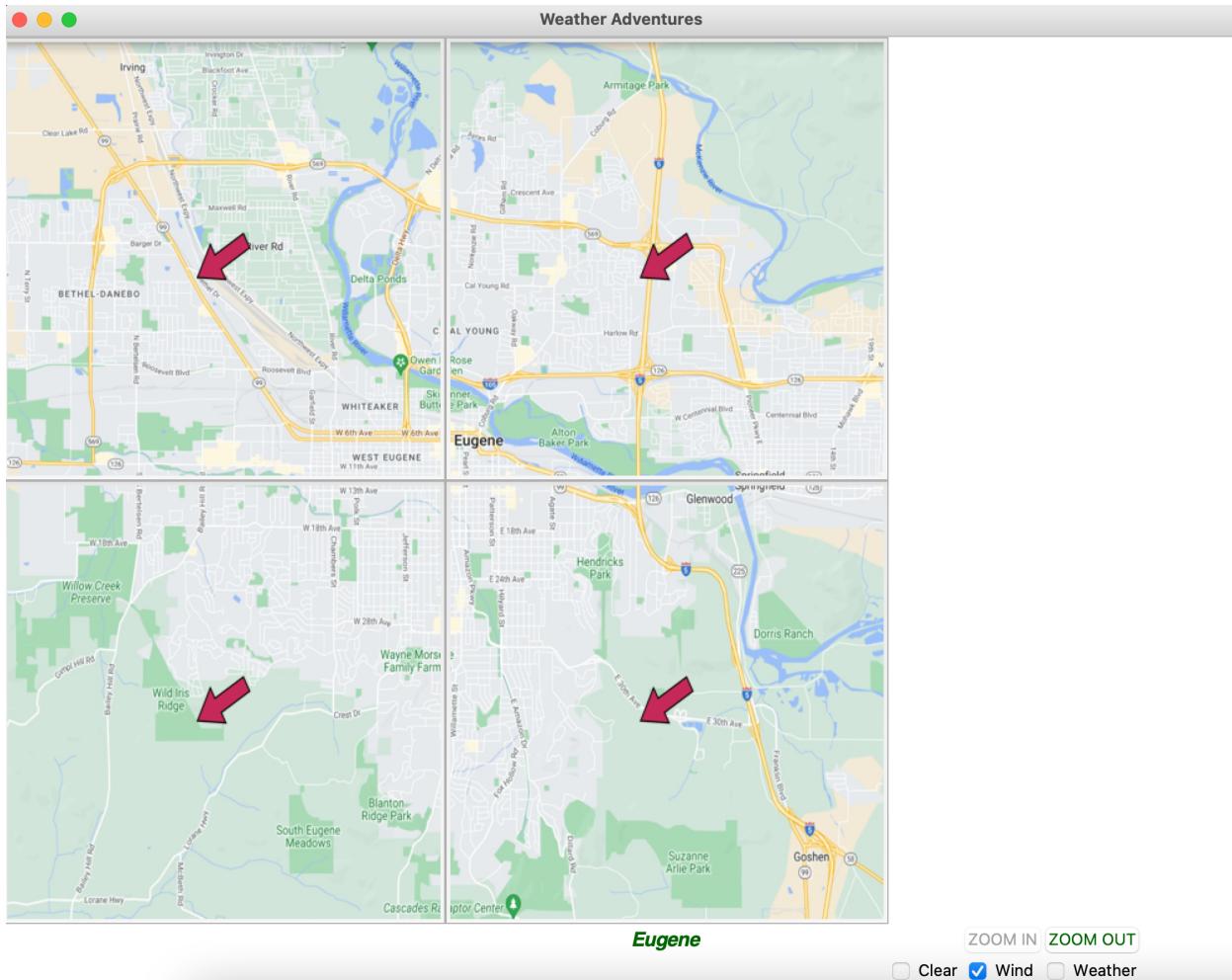


There are three check boxes along the bottom of the window: “Empty,” “Weather,” and “Wind.” Where “Empty” is the default, and relates to the lack of weather and wind icons. The user can select to display a symbolic summary of the weather by checking the box labeled “Weather.”



This image is just an example and the user's may not look exactly the same, as the weather symbols will change depending on the current weather in the area.

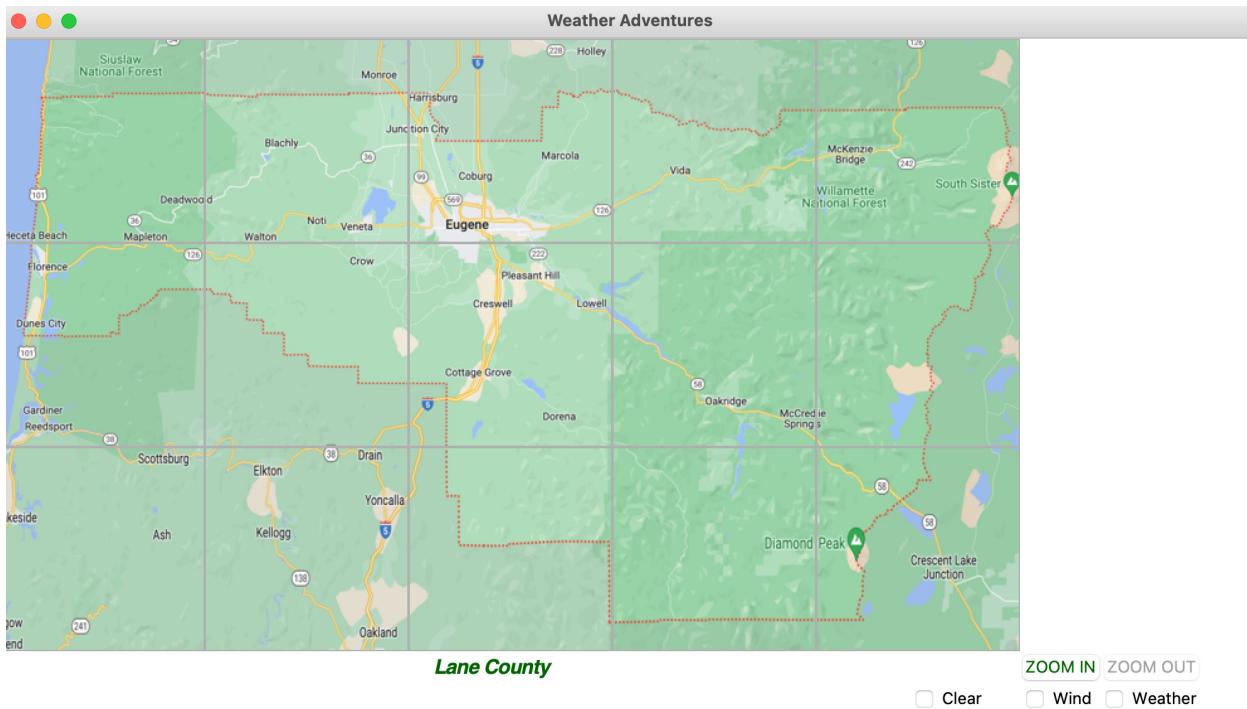
Selecting the “Wind” checkbox will overlay a vector of the direction of the wind for each region of the map display.



This image is just an example and the user's may not look exactly the same, as the wind symbols will change depending on the current weather in the area.

You can return to any of the previous states of the map by reselecting the desired checkbox.

The Weather Adventures application has two maps that can be seen. On default, the button labeled "Zoom In" is grayed out and unclickable. This is due to the Eugene map being the most zoomed in map, so there is no way to zoom in further. By clicking the button labeled "Zoom Out," the user's map will be switched to an empty map of Lane County.



The button logic is the exact same for the map displaying Lane County as it was when displaying the Eugene map. The only difference is that on the Lane County map the “Zoom Out” button is now grayed out and unclickable, but the button labeled “Zoom In” is enabled to return to the map of Eugene.

To get more in depth weather information or recommendations of what activities to do in a specific area, you can click on a region of the map. This will result in a pop up appearing separate from the original application window.

### Weather



This area is currently experiencing a clear sky at 34.95 degrees fahrenheit.

**Humidity = 85%      Visibility = 10000 feet**

### Lane County Recommendation

#### Outdoor Activities

**Bike through the covered bridges scenic bikeway**

- Totaling 36 miles, this loop can be as hard or as easy as you want. Grab your bike and check out some bridges!
- Difficulty: Moderate
- Location: Main St, Cottage Grove, OR 97424 (start/end)

[Click to View Website](#)

**Elk Hiking Trail**

- 1.6 mile 13ft elevation gain, only takes 30 minutes to complete. Great for a quick, relaxing day.
- Difficulty: Easy
- Location: see coordinates

[Click to View Website](#)

**Kayak on Dexter Reservoir**

- Kayak for as long as you'd like on this beautiful lake.
- Difficulty: Moderate
- Location: Jasper, OR 97438

[Click to View Website](#)

This image is just an example and the user's may not look exactly the same, as the recommendations and weather details will change depending on the current weather and the selected area.

On the left hand side of the pop up is the more in depth weather information such as the wind speed or temperature. On the right side, there are three recommended activities that would be appropriate for the current weather in the area.

You can have as many of these pop ups up at one time, so if they want they can compare and contrast different area recommendations.

To update the weather information, you will have to close the application and rerun it.