

EE/CprE/SE 492 STATUS REPORT 5

Start Date – End Date: 3/14/2025 - 4/3/2025

Group number: sdmay25-18

Project title: Weather Triggered Wireless Telemetry System

Client &/Advisor: Daji Qiao and Sarath Babu

Team Members/Role:

1. **Alex Chambers:** Individual Component Designer
2. **Alexander Christie:** Client Interaction
3. **Adam Fields:** Data Formatting
4. **Nisha Raj:** Team Lead
5. **Aidan Gull:** Component Integration
6. **Colin Kempf:** Documentation

Summary

During this report period, our group focused on finalizing integration between the different components and beginning to bug test errors. First our group completed the integration between the API Prediction component and the Data Collection component. With these components both on the ARA server and communicating with each other, we began to test the scripts predicting and collecting, and debugged any issues encountered. Additionally our group continued to work on the Data Formatting component, making some finalizations, putting the script onto the ARA server, and getting it set up for integration.

Accomplishments

- **Integration**
 - Completed integration between the API Prediction component and the Data Collection component
 - Begun to prepare Data Formatting integration
- **Testing & Bug Fixing**
 - Tested the integration between the two components
 - Fixed several bugs that arose while letting the program predict and collect data
 - Indexing error in the API Prediction component
 - Debugged Meteo API specific issues
- **Data Formatting**
 - Modified code to add in an optional “keywords” argument, which is used for file naming and eventually querying.
 - Moved code onto the ARA server.

Pending issues

- No current pending issues

Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Contributed Hours</u>	<u>HOURS cumulative</u>
Nisha Raj	- Worked on ARA integration on the server - Debugged integration issue as they came up - Worked with fixing indexing error in weather API script	12	119
Alexander Christie	-Integrated Prediction on the ARA server -Debugged Meteo issues regarding Timezone and Indexing.	12	118
Aidan Gull	-Modified code to add in an optional “keywords” argument, which is used for file naming and eventually querying. -Moved code onto the ARA server and ran a few tests	12	118
Colin Kempf	- Testing integration between the two integrated components - UI Research for future development	12	118
Alex Chambers	- System integration testing - UI Research	12	122
Adam Fields	-Modified code to add in an optional “keywords” argument, which is used for file naming and eventually querying. -Moved code onto the ARA server and ran a few tests	12	118

Current Plans

- **Data Formatting Integration**
 - Send the gathered data from the Data Collection component to the Data Formatting component
 - Prepare the correct number of files, and ensure the data is sent properly between the two
 - Begin testing the two components integration as well as the entire program working together
- **UI Implementation**
 - Create a UI for users to be able to access collected data
 - UI will be developed on Grafana

Summary of advisor meetings

Our group met with our advisor and client on 3/26 and 4/2. During these meetings we gave our weekly updates, presenting our progress. We discussed the integration steps we had taken and explained some of the bugs we had been encountering. We also went over our timeline, explaining

our future plans. This largely included our plans for UI implementation and completion of integration with the Data Formatting component. We answered any questions our advisor and client had and made sure that we were on the same page on our next steps.