

Senior Design - Weekly Report

February 18th - March 4th

Team Number: sdmay23-37

Project Title: Microgrid Data Platform Enhancements

Advisor/Client: Mathew Wymore

Team Members/Roles:

Alexander Haack - Software

Carson Love - Cybersecurity

David Harmon - Software

Harvey Forchu - Computer

Kenyon Fergen - Software & Cybersecurity

Summary

Progress on the project is continuing at a fair pace. Individuals are building on top of the frameworks from the last report.

Accomplishments

- Alexander
 - Started getting data from the Solar Crate gateway.
- Carson
 - Investigate solutions for secret storing issue (github).
- David
 - I connected the API endpoint from the backend to the frontend, so now users are able to login via the Google login button and get their information from our backend server.
 - I added a pattern for calling the REST APIs on the frontend so it's easier to grab other data besides the user information, like the site information and site measurements, and display it on the frontend.
- Harvey
 - Got the api for the tesla powerwall and dranetz added to the backend. Began work on the gateway api.
- Kenyon
 - Deployed application to server. Tested API calls to server in Postman.

Individual Contributions

Name	Individual Contributions	Hours this period	Hours Cumulative
Alexander Haack	Got data from the solarcrate gateway connected to the backend	5	12
Carson Love	(Out of Town for FAST Conference), Research securely storing secrets. Administrative work	4	12
David Harmon	Connected user Google Login button to backend user login REST API and services. Logging in with Google creates a new user associated with the Google info or grabs the stored info associated with that Google account.	5	13
Harvey Forchu	Started work on the api needed to pull data from the gateway sensor	5	12
Kenyon Fergen	Logged in to the previous teams VM in	4	12

	order to deploy the application for the first time and ensure it's working properly.		
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Plans for Upcoming Weeks

Alexander Haack - Add frontend support to adding users to sites. Research adding different user levels. Test sending REST API calls to the remote server.

Carson Love - Begin security testing of VM. Investigate Google Auth finding an iastate maintainer

David Harmon - Work with Kenyon to connect the other frontend API calls to the backend API controllers. Work with Xander on adding more functionality and information to the Site/Microgrid page.

Harvey Forchu - Gather other data and credentials necessary to complete the gateway config file

Kenyon Fergen - Work with David to connect the frontend to the backend API. Optimize Plotly using historical (and live if the Solar Crate gets turned on) data.

Meeting with Advisor

Mat reached out to Nicholas David on our behalf to resolve credential issues. Nick was also able to get the Tesla Powerwall online so we have some data to work with. Getting the rest of the solar crate set up is still on hold for the time being.