

Team Name: sdmay23-17

Team Members:

- Rian Lamarque
- David Wolfe
- Joseph Hunter
- Elijah Hanson
- Thomas Ruminski

Report Period: 2/19 - 3/4

Summary of Progress

- **IoT Infrastructure**
 - Set up, configured, and extensively debugged sensors
 - Set up, configured, and extensively debugged a prototype base station
 - Add devices and gateways to The Things Stack
 - Create an integration from The Things Stack to AWS IoT Core
 - Set up a python script to create downlink packets to the sensors to adjust their data collection interval time
 - **AWS Architecture**
 - Developed data model using AWS dynamoDB
 - Transferred user data from S3 to dynamoDB
 - Moved lambda functions from operating on S3 to operating on dynamoDB
 - **Mobile App Development**
 - Finished forms to reset password, change email, change username
 - Finished form for adding new sensors to accounts
 - Finished delete and edit sensors forms on user accounts
 - Modified graph display
 - Modified timeline layout
 - Refactored code into components
 - Added functionality for multiple sensors on one graph
 - Refactored data model for dynamoDB response
 - **System Wide**
 - Round trip communication implemented
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Pending Issues

- **IoT Infrastructure**
 - Order and deploy more base stations and sensors
- **AWS Architecture**
 - Develop method for sorting graphql responses
- **Mobile App Development**
 - Finalize end to end user experience

Plans for upcoming report period

- **IoT Infrastructure**
 - Begin implementation of downlinks from the network server level
 - **AWS Architecture**
 - Begin security testing
 - **Mobile App Development**
 - Condense code to make it more modular and component based
 - Finalize all features on app
 - Start testing Application for performance, reliability, and security
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Contributions by person

- Tom Ruminski
 - Team Role: IoT Infrastructure
 - Contributions: Wrote a script to create CRC-16 KERMIT checked downlink packets, researched effective ways to send downlinks to the sensors
 - Hours: 8
- David Wolfe
 - Team Role: IoT/Mobile App Development.
 - Contributions: Resigned front end API calls to support graphql and new dynamoDB data model.
 - Hours: 10
- Rian Lamarque
 - Team Role: AWS Infrastructure
 - Contributions: Designed and deployed data model. Began review of roles and policies for future scoping/cleanup
 - Hours: 7
- Elijah Hanson
 - Team Role: AWS Infrastructure
 - Contributions: Formed graphql query to filter readings based on time of recording
 - Hours: 6
- Joe Hunter
 - Team Role: Mobile App Development
 - Contributions: Added an edit sensor name to the app. Also looked into testing processes for the app as well as proper state management.
 - Hours: 6