MICHIGAN STATE
U N I V E R S I T Y

Project Plan Presentation
Driven Connect Application, Server, and Backend

The Capstone Experience

Team Driven-4

Dongyu Lyu
Dorian Florescu
Tim Nwanze
Jon Yamashita
Ryan Dukovich
Anthony Eid

Department of Computer Science and Engineering
Michigan State University

Spring 2023

From Students…
…to Professionals

Project Sponsor Overview

- Consultation, Solutions, and Operations

- IoT/IIoT PLM, Service Management, Security

- One-Stop Shop for IoT Solutions

Project Functional Specifications

- Eases access to products

- Creates interface for user interaction with product

- Visually Intuitive Web App

Project Design Specifications

- App is a Web Application

- Follows Driven-4 Branding

- Left-hand Menu (collapsible) Navigation

Screen Mockup: Admin Dashboard

Team Driven-4 Project Plan Presentation

Screen Mockup: User Management
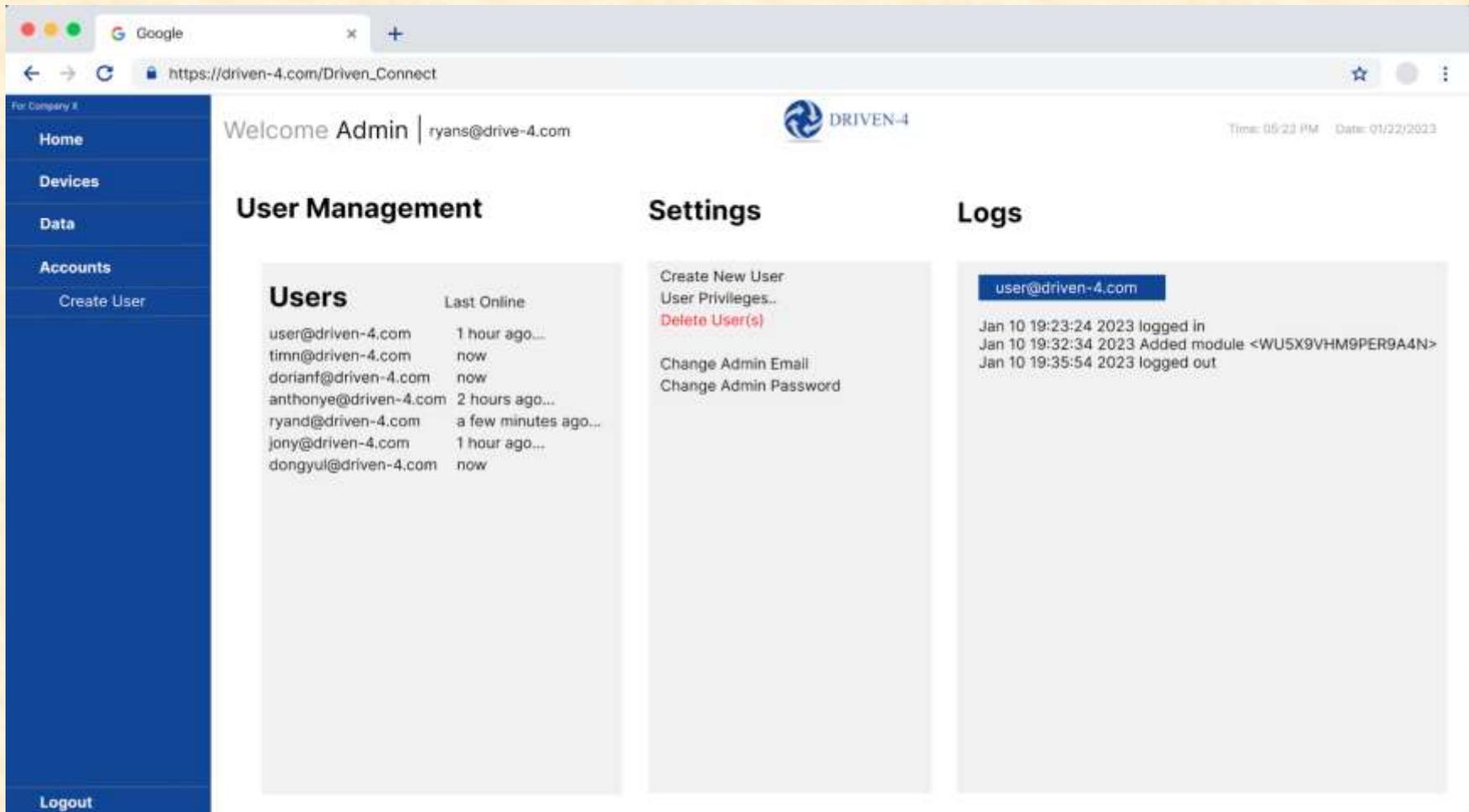
Screen Mockup: All devices page

Screen Mockup: Device management

Screen Mockup: Data Analytics
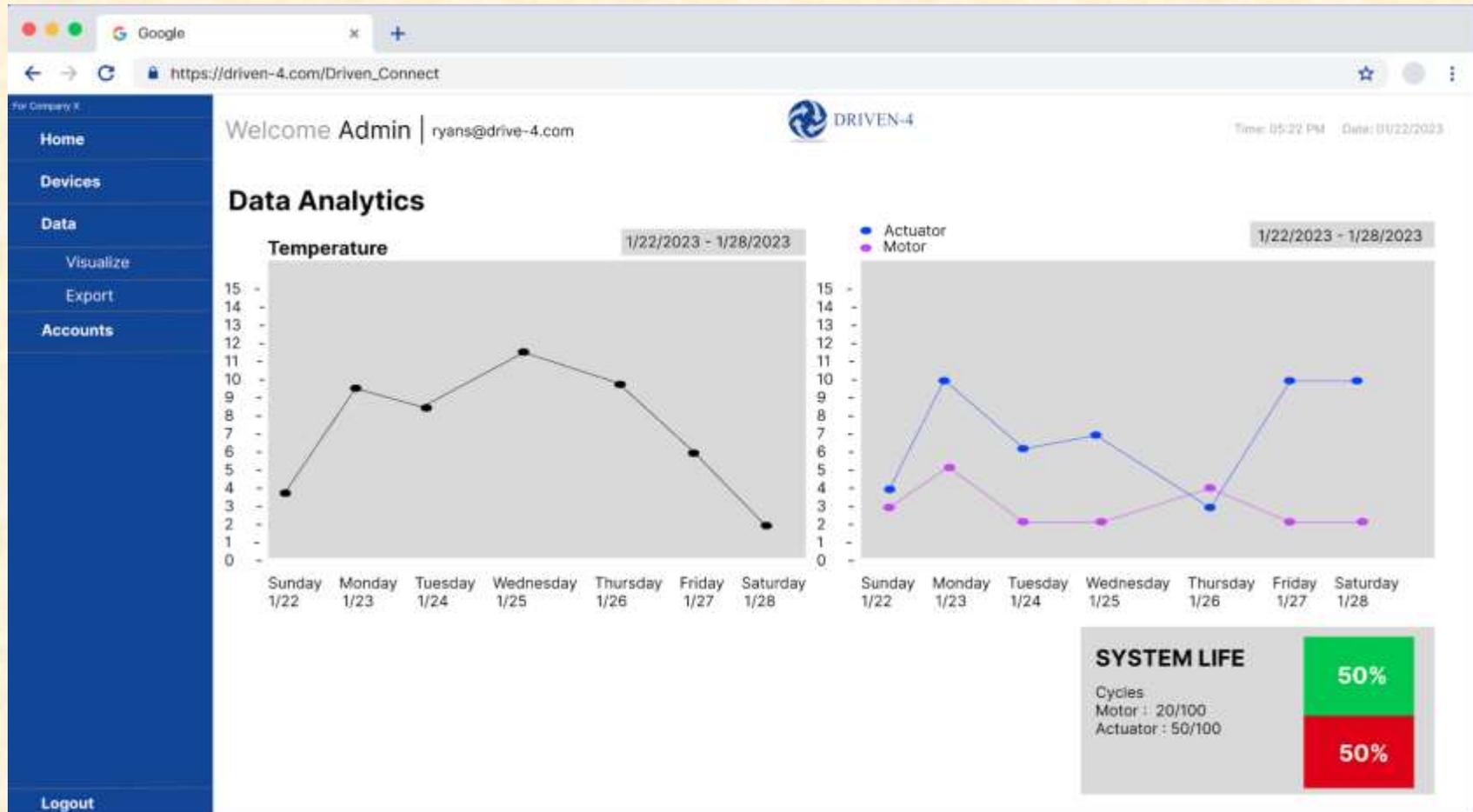
Project Technical Specifications

- System Architecture

- Database Schema

- Style Guide

System Architecture

Project System Components

- Hardware Platforms
  - Driven IoT Connectivity Board
- Software Platforms / Technologies
  - Python, Flask
  - MySQL
  - Pandas
  - HTML, CSS, JS, Bootstrap
  - Amazon Web Services (AWS)

Project Risks

- Performing data analysis on data in unknown formats
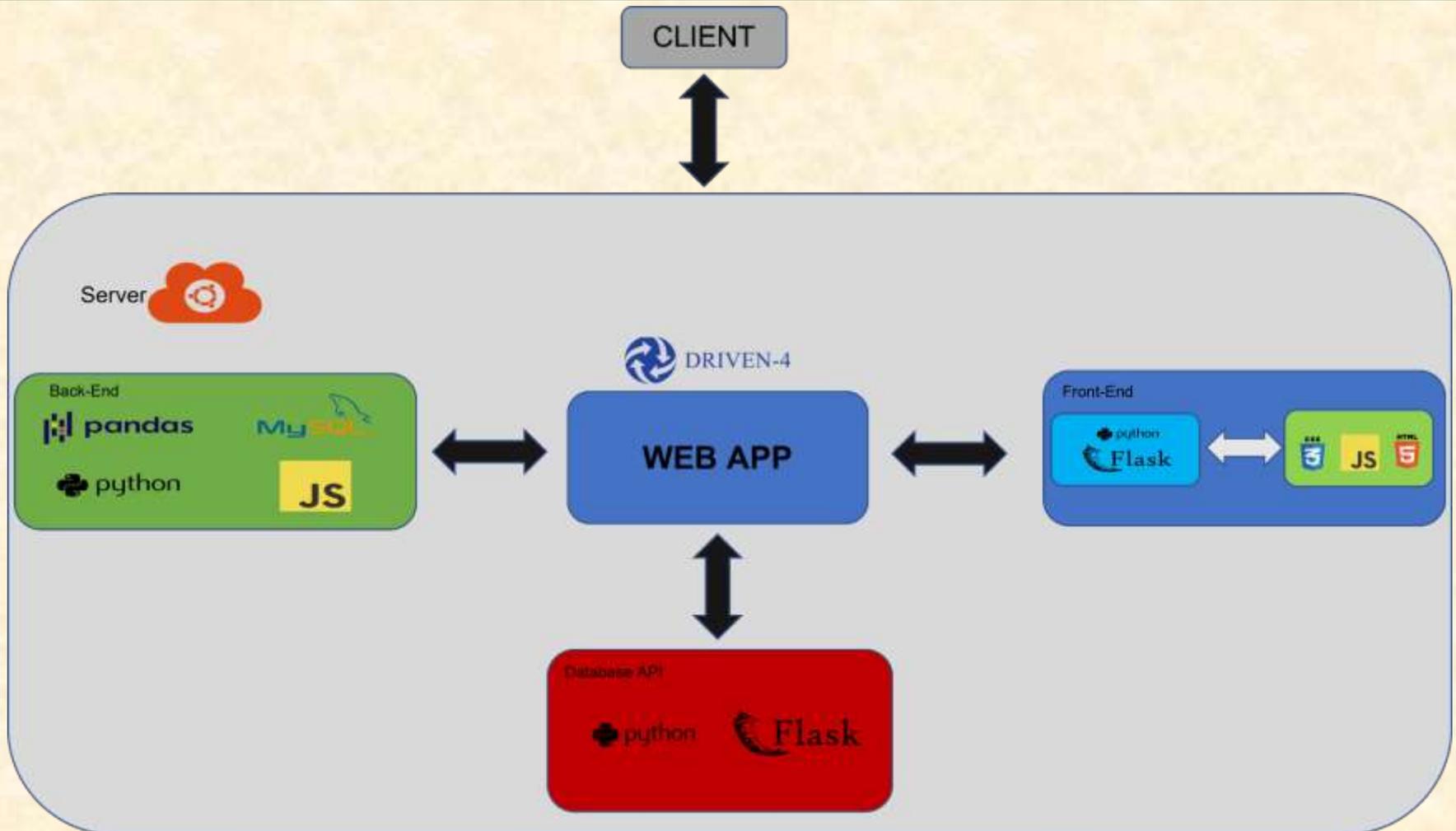 - The user will have the ability to view different kinds of data regarding their device
  - Data abstraction into a Matplotlib graph
- Linking parts of our system together
  - Our application allows users to access information from different parts of the server
  - Set up communication between all parts of the server
- Real-time notifications and updates
  - Several aspects of our application require us to send information in real-time
  - Set up real-time communication inside our system
- How to make an OTA server work with cellular
  - The OTA server for now can only send updates over wi-fi
  - With proper research we will rewrite the OTA function and allow cellular updates.

Questions?

? ? ? ?

? ?

? ?

?