Beta Presentation
DRIVEN-4 Connect Update and Upgrade

The Capstone Experience

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Project Overview

• Headquartered in Saint Joseph, Michigan
• Areas of expertise include PLM, IoT, and cybersecurity.
• To develop an easy-to-use web application to talk to the database of their users, firmware, and modules with the ability to perform data analysis on their table.
System Architecture

- DRIVEN-4 IoT Module
- DRIVEN-4 Connect Server
- Backend
  - Database
  - AWS
- Frontend
  - HTML
  - CSS
  - JS
- pandas
- Flask
- SQLAlchemy
- MySQL
Home Page for Company Users
Device Management Page

The image shows a screenshot of a device management page from a web interface. The page displays a list of devices with their names, IDs, firmware names, status, and options for registration and firmware download. The devices listed include:

- **Name**: facility, **ID**: 1, **Firmware Name**: BinTest.bin, **Status**: inactive
- **Name**: IT_office, **ID**: 8, **Firmware Name**: ddwifi.bin, **Status**: inactive
- **Name**: Device Test, **ID**: 11, **Firmware Name**: modem_comms.ino.bin, **Status**: inactive
- **Name**: Device Test, **ID**: 12, **Firmware Name**: Factory, **Status**: active
- **Name**: Samsung Galaxy S21, **ID**: 13, **Firmware Name**: None, **Status**: inactive

There are buttons to toggle the device status and download firmware for active devices.
Data Analysis Page

![Data Analysis Page Screenshot]

- **Create New Query**: Enter Query Name
- **Available Data Sets**:
  - **SS**
    - idEntry : int
    - idModule : int
    - IMEI : varchar(255)
    - idEndpoint : int
    - time : datetime
    - dB : int
    - ModemTemp : decimal(10,2)
  - **SS2**
    - idEntry : int
    - idModule : int
    - idEndpoint : int
    - time : datetime
    - temperature : decimal(10,2)
  - **SS3**
    - idEntry : int
    - idModule : int
    - idEndpoint : int
    - time : datetime
    - temperature : decimal(10,2)

- **Run**: Run the query
- **Results**
- **Graph**
Payment Information Page
What’s left to do?

• Stretch Goals
  ▪ Securely storing CC information outside of session

• Other Tasks
  ▪ Make sure visual style is coherent
  ▪ Test flow of user sequences
  ▪ Analyze loading times, look for optimizations
Questions?