

MICHIGAN STATE

UNIVERSITY

Beta Presentation

DRIVEN-4 Connect Update and Upgrade

The Capstone Experience

Team DRIVEN-4

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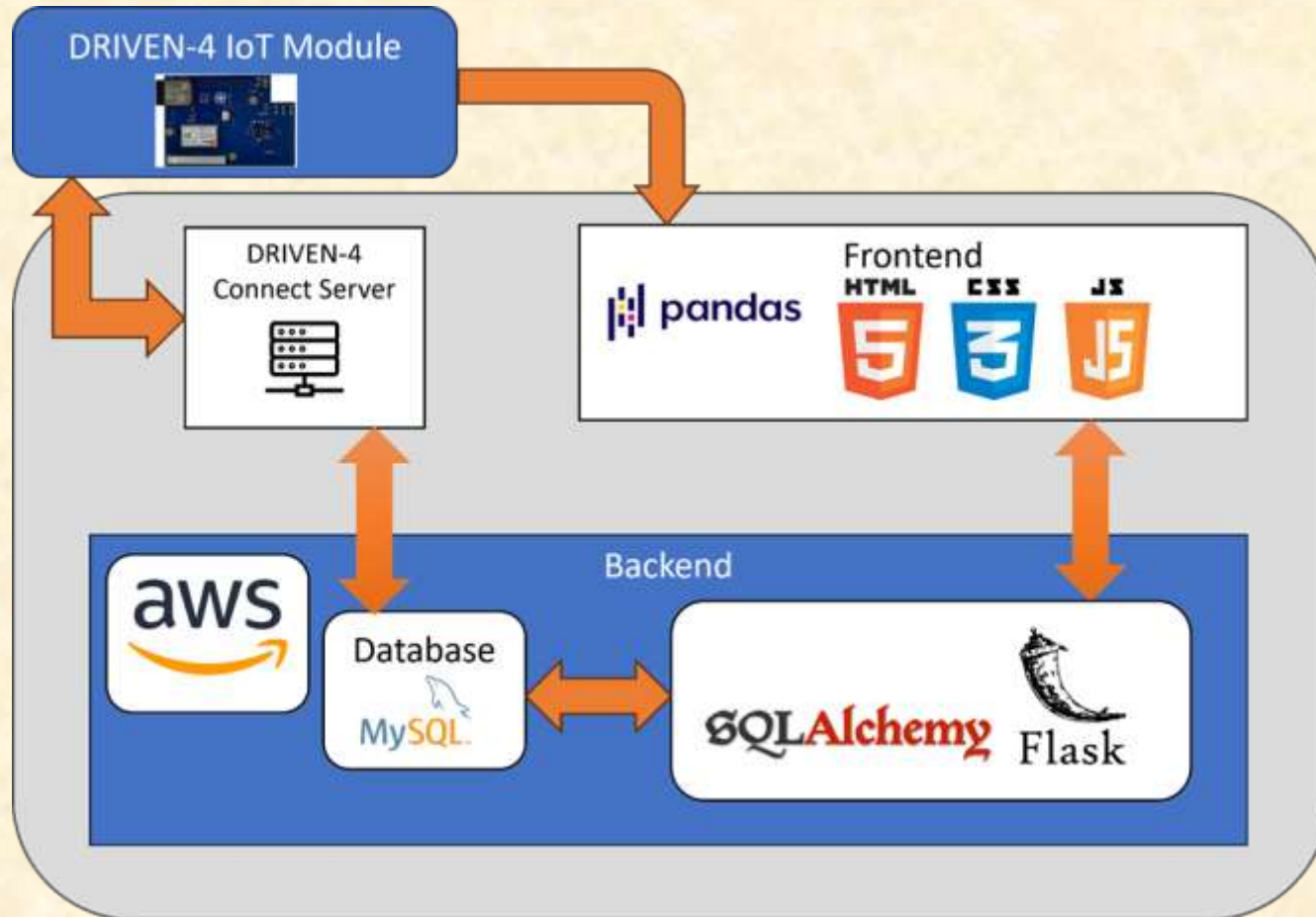
*From Students...
...to Professionals*

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



Home Page for Company Users

The screenshot shows a web browser displaying the DRIVEN-4 application. The browser's address bar shows the URL 127.0.0.1:5000/home. On the left, a dark blue sidebar contains navigation links: Home, Device Management, Data Management, Data Analysis, User Management, Account Settings, Billing, and Logout. The main content area features the DRIVEN-4 logo and a welcome message for 'dongyu' (dongyu@dongyudairy.com, admin). Below this is a 'Home' section with a 'Device Information' table. The table lists devices with their status (Inactive or Active), Serial No., and IMEI. At the bottom, there is a 'Subscription Information' section with three cards: Modules, Storage Usage, and Billing Details.

Device Name	Status	Serial No.	IMEI
facility	Inactive	WUSX9VHM9PER9A4N	350857120901940
IT_office	Inactive	WSX3QRXM9PQ545XC	350857120904403
Device Test	Inactive	None	TEST1234
Device Test	Active	None	893274091827340
Samsung Galaxy S21	Inactive	None	IMEI1234
Samsung S24	Inactive	None	IMEI2444



Device Management Page

The screenshot displays the DRIVEN-4 Device Management interface. On the left is a blue sidebar with navigation links: Home, Device Management (selected), Data Management, Data Analysis, User Management, Account Settings, and Billing. The main content area features the DRIVEN-4 logo and a welcome message for 'dongyu' (admin). Below this is a 'Device Management' section with a search bar and 'Register Device' and 'Upgrade All' buttons. A table lists five devices with their respective details and actions.

Name	ID	Firmware Name	Status	Actions
facility	1	BinTest.bin	Inactive	Toggle Active, Download, Settings
IT_office	8	ddwifi.bin	Inactive	Toggle Active, Download, Settings
Device Test	11	modem_comms.ino.bin	Inactive	Toggle Active, Download, Settings
Device Test	12	Factory	Active	Toggle Active, Download, Settings
Samsung Galaxy S21	13	None	Inactive	Toggle Active, Download, Settings



Data Analysis Page

DRIVEN-4

Welcome dongyu
dongyu@dongyustair.com (admin)

Data Analysis

Create New Query

Enter Query Name

```
1 SELECT time, ModemTemp
2 FROM SS
3 WHERE idModule=1;
```

Run

Results

Graph

Available Data Sets

SS

- idEntry : int
- idModule : int
- IMEI : varchar(255)
- idEndpoint : int
- time : datetime
- dBs : int
- ModemTemp : decimal(10,2)

SS2

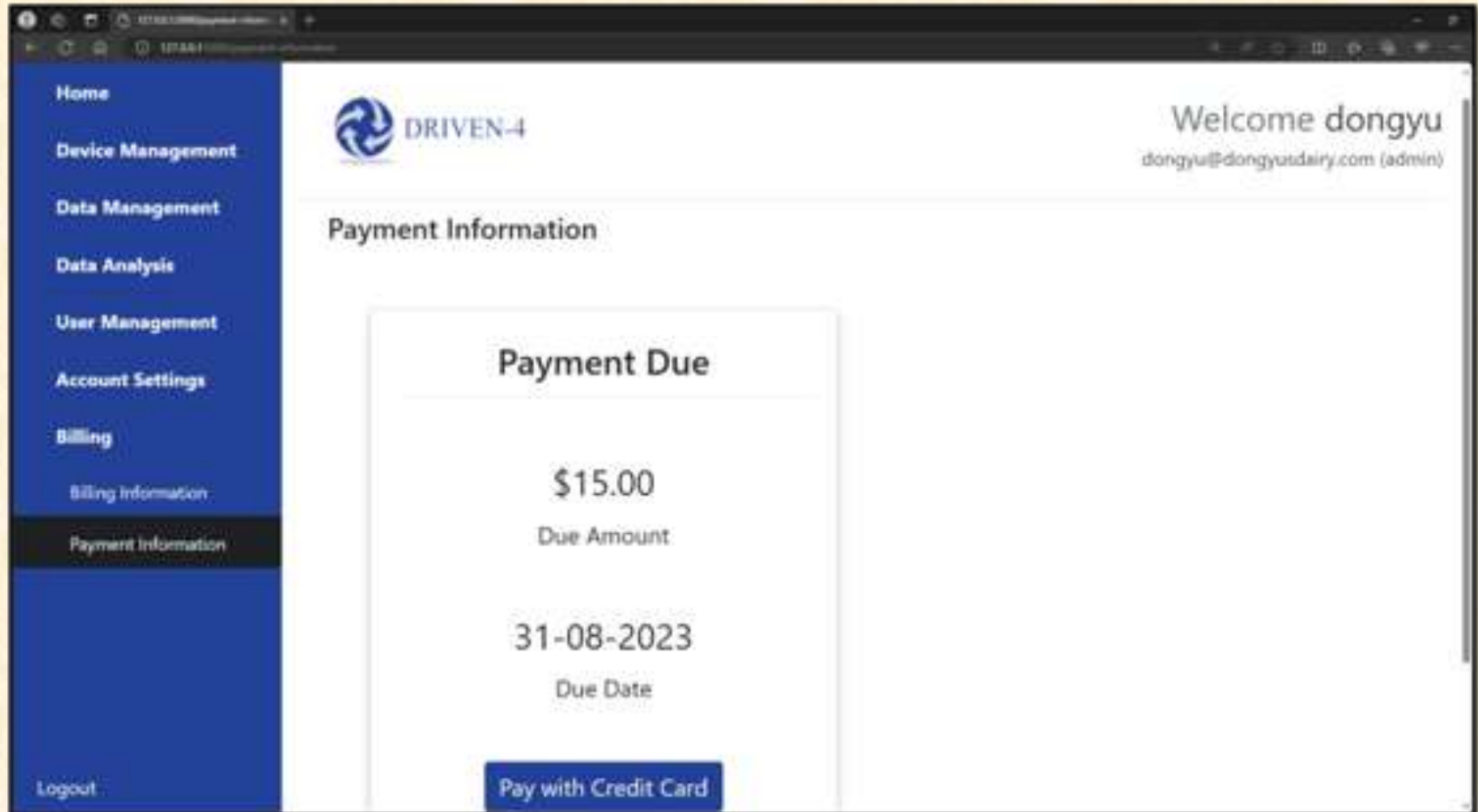
- idEntry : int
- idModule : int
- idEndpoint : int
- time : datetime
- temperature : decimal(10,2)

SS3

- idEntry : int
- idModule : int
- idEndpoint : int
- time : datetime
- temperature : decimal(10,2)



Payment Information Page



The screenshot shows a web browser displaying the DRIVEN-4 dashboard. On the left is a blue sidebar with navigation links: Home, Device Management, Data Management, Data Analysis, User Management, Account Settings, Billing, and Payment Information (which is highlighted). At the bottom of the sidebar is a 'Logout' link. The main content area has a white background with the DRIVEN-4 logo and the text 'Welcome dongyu dongyu@dongyudairy.com (admin)'. Below this is a section titled 'Payment Information' containing a white card with the following details: 'Payment Due', '\$15.00 Due Amount', '31-08-2023 Due Date', and a blue button labeled 'Pay with Credit Card'.

Home

Device Management

Data Management

Data Analysis

User Management

Account Settings

Billing

Billing Information

Payment Information

Logout

DRIVEN-4

Welcome dongyu
dongyu@dongyudairy.com (admin)

Payment Information

Payment Due

\$15.00
Due Amount

31-08-2023
Due Date

Pay with Credit Card



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?

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