

MICHIGAN STATE

UNIVERSITY

Beta Presentation

DRIVEN-4 Connect Application

The Capstone Experience

Team DRIVEN-4

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

Project Overview

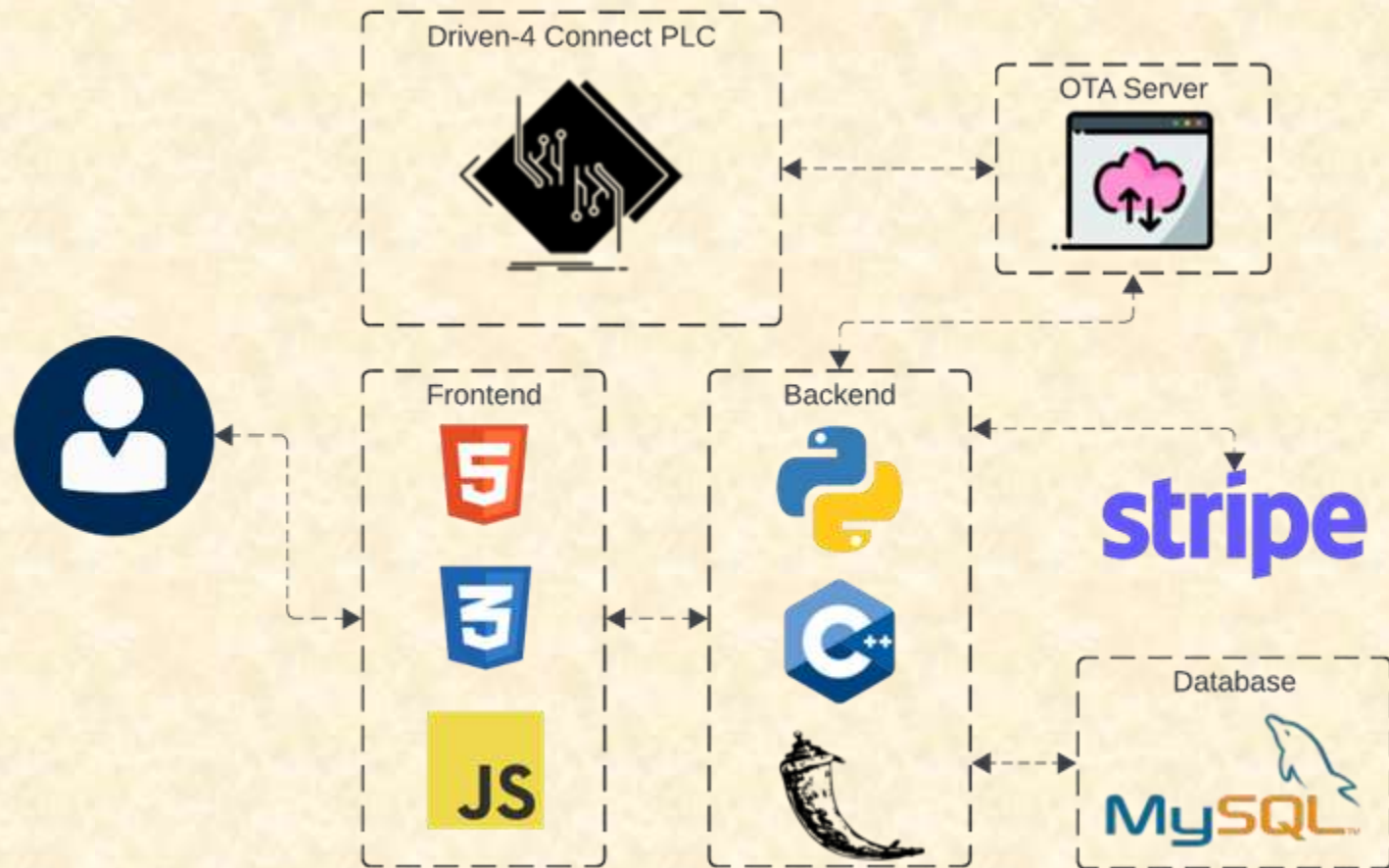
DRIVEN-4 clients receive a programmable logic component (Module)

Our DRIVEN-4 Connect web application:

- Enables custom database creation
- Provides database endpoints and can submit external API calls
- Allows data queries and visualizations
- Monitors usage and charges customers



System Architecture



Database Creation

The screenshot displays the DRIVEN-4 web application interface for data modification. The browser address bar shows the URL `www.driven4connect/datamodification`. The page title is "Data Modification".

Data Set Modifications

A dropdown menu is set to "Docks". Below it, a list of fields is shown with their editability status:

Field	Editability
idEntry	Cannot Edit
idModule	Cannot Edit
IMEI	Cannot Edit
idEndpoint	Cannot Edit
time	Editable (Edit button)
duration	Editable (Edit button)

Buttons for "Add Columns" and "Remove Columns" are located at the bottom of this section.

Available Data Sets

The interface lists several data sets with their respective fields and data types:

- Docks**
 - IMEI : VARCHAR(255)
 - duration : INTEGER
 - idEndpoint : INTEGER
 - idEntry : INTEGER
 - idModule : INTEGER
 - time : DATETIME
- Trucking**
 - IMEI : VARCHAR(255)
 - duration : INTEGER
 - idEndpoint : INTEGER
 - idEntry : INTEGER
 - idModule : INTEGER
 - time : DATETIME
- SS**
 - IMEI : VARCHAR(255)
 - Temp : INTEGER
 - idEndpoint : INTEGER
 - idEntry : INTEGER
 - idModule : INTEGER
 - time : DATETIME
- SS2**
 - idEndpoint : INTEGER
 - idEntry : INTEGER
 - idModule : INTEGER
 - temperature : DECIMAL(10, 2)
 - time : DATETIME
- Tilow**
 - IMEI : VARCHAR(255)
 - idEndpoint : INTEGER
 - idEntry : INTEGER
 - idModule : INTEGER



Endpoint Configuration

The screenshot shows a web browser window with the URL `www.driven4connect/endpointConfiguration`. The page title is "Endpoint Configuration" and the breadcrumb is "Home / Endpoint Configuration". The main heading is "Endpoint Configuration" followed by the URL `http://driven4connect/DongyusDairyID2/Docks`.

Below the heading is a section titled "Available Api Keys" containing a table with the following data:

Api Key	Date Created	User	Enabled	Debug Mode		
9098234-alksdjf-239048	Mon, 15 Apr 2024 12:09:12 GMT	Dongyu	0	1	Edit	Remove
Vn-k7LS0ICbFqGU	Mon, 30 Sep 2024 17:35:58 GMT	Dongyu	1	0	Edit	Remove

Below the table is an "Add Endpoint" button.

The next section is "Outgoing API Request" with the following fields:

- Request Type: POST
- API URL: `https://datausa.io/api/data?drilldowns=Nation&measures=Population`
- Headers (JSON format): `{"Content-Type": "application/json"}`
- Request Body (JSON format): `{"validationFactors": []}`

At the bottom of the "Outgoing API Request" section is a "Send Request" button.



Data Querying

The screenshot displays the DRIVEN-4 web application interface. At the top, the browser address bar shows the URL `www.driven4connect/querying`. The application header includes the DRIVEN-4 logo and a menu icon. The main content area features a line graph titled "Freight Use Frequency" with a "Remove" button in the top right corner. The graph plots "Visits" on the y-axis (ranging from 0 to 10) against "Docking Bay" on the x-axis (ranging from 1.0 to 5.0). The data points are approximately (1.0, 2.0), (2.0, 3.0), (3.0, 4.5), (4.0, 7.0), and (5.0, 10.0). Below the graph is a "Query Database" section with a text input field. To the right of the query field is a panel titled "Allowed Libraries" containing buttons for `math` and `matplotlib`. Below this is a section titled "Allowed Functions" with buttons for `add_data`, `delete_data`, `get_data`, `get_data_by_date_range`, `get_data_size`, and `make_api_call`. At the bottom of this panel are two tabs labeled "untitled.py" and a plus sign to add more. The code editor shows the following Python code:

```
1 data=get_data('DockData', ['duration', 'idModule'])
2
3 count_by_id = {}
4 bay_time_by_id = {}
```



Payments Processing

DRIVEN-4

www.driven4connect/stripe/customer/setup

DRIVEN-4 TEST MODE

Enter payment details

Email: dongyu@dongyusdaiy.com

Save card information

Card information

5613 3859 0236 7725

06 / 29 419

Cardholder name: Quinton M. Strausbaugh III

Country or region: United States

46806

Save my info for 1-click checkout with Link
Securely pay on DRIVEN-4 and everywhere Link is accepted.

(419) 956-8202

Link

Save card

By saving your payment information, you allow DRIVEN-4 to charge you for future payments in accordance with their terms.

By clicking Save card, you agree to the Link Terms and Privacy Policy.

Powered by stripe Terms Privacy



What's left to do?

- Features
- Stretch Goals
 - Interpreter save status indicator
 - UI ability to publish module firmware upgrade
 - DRIVEN-4 admin account management
- Other Tasks
 - Dashboard UI improvements
 - Site-wide testing
 - Latest app deployment & latency testing
 - Documentation



Questions?

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