

**MICHIGAN STATE**  

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**U N I V E R S I T Y**

# Alpha Presentation

## MAPT: Manufacturing Avatar Plant Twin

### The Capstone Experience

Team Dow

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Spring 2020



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

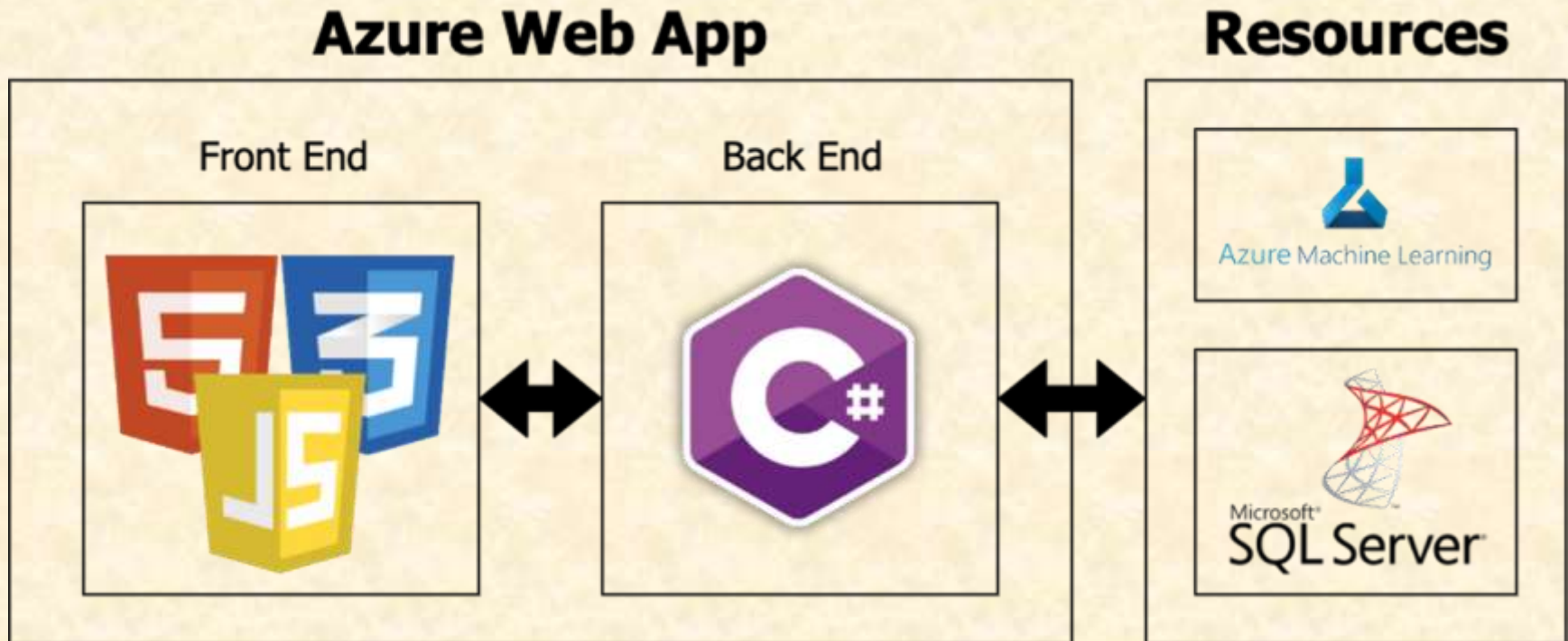
# Project Overview

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- Create Interface for Dow's Experts
- Record Sensor Placement on Specific Assets
- Build Database Containing These Records
- Make Reporting Process Easy and Efficient



# System Architecture



# Dashboard

**Dow** Dashboard Larry

**New Asset**

**Back to Pump**

**User Settings**

**Modified Assets**

- Pump 52
- Pump 53
- Pump 54
- Pump 55
- Pump 56
- Pump 57
- Pump 58

**67**

**Midland Plant**

- Region: United States
- City: Midland
- Total Asset: 154
- Modified Assets: 7

**User Profile:**

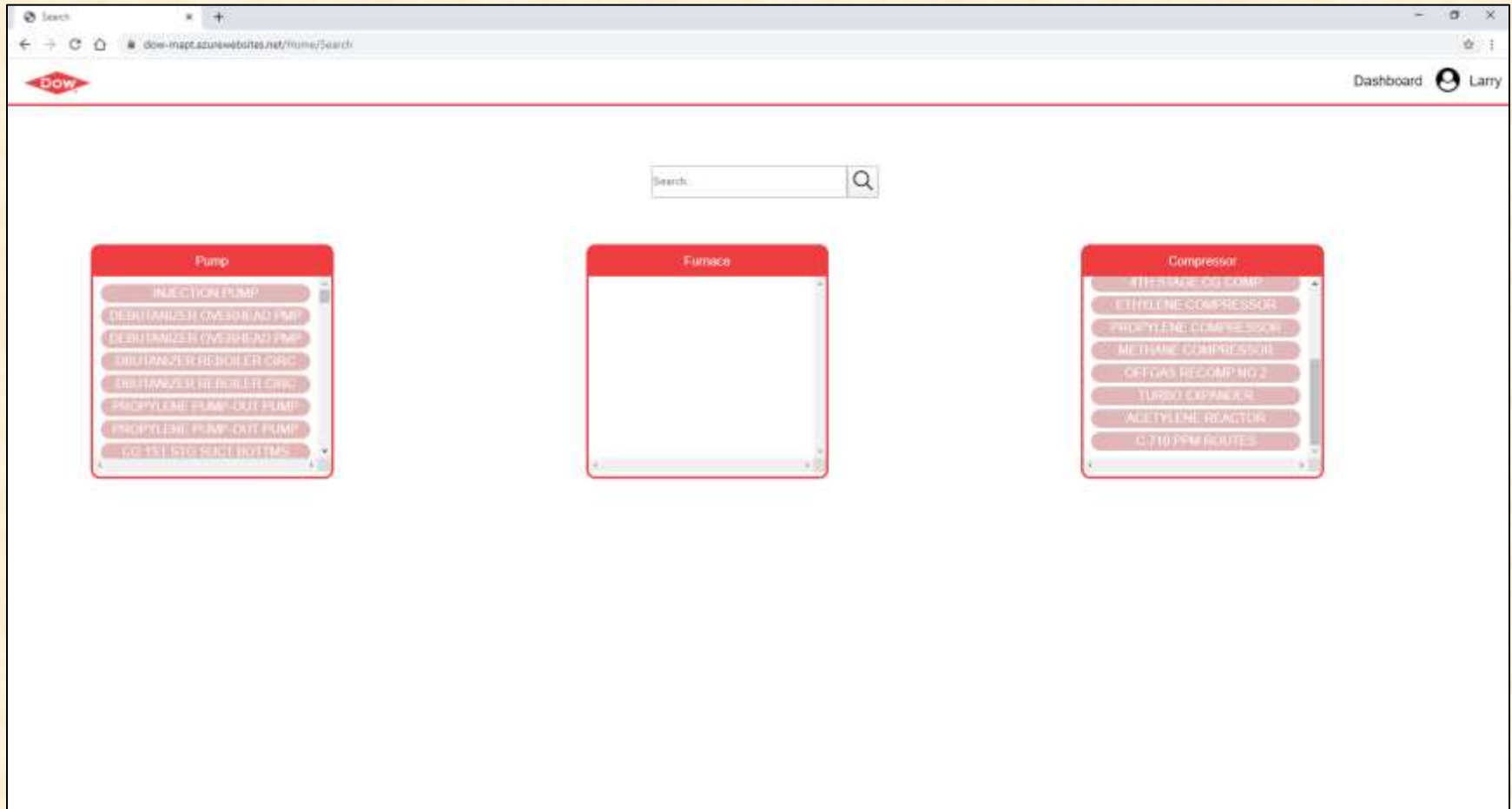
- Name: Larry Zahner
- Current Score: 67
- Region: United States
- Location: Midland

[User Settings](#)

[Sign Out](#)



# Asset Search



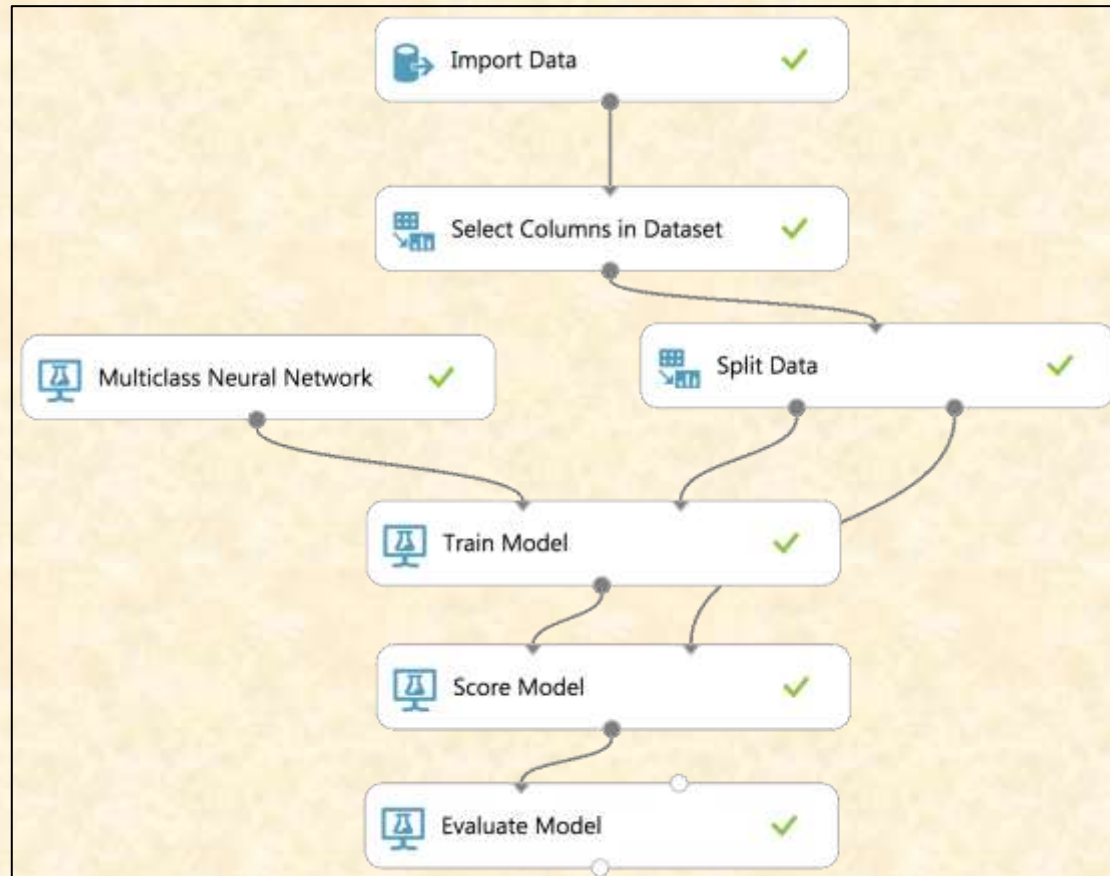
# Sensor Page

The screenshot shows a web browser window with the URL `dow-map.azurewebsites.net/Forms/Sensor`. The page header includes the Dow logo and a user profile for 'Larry' with a 'Dashboard' link. The main content area contains a 'Sensor Select' dialog box with a search bar labeled 'Search Sensor' and a grid of 12 sensor ID buttons. The first button, 'D\_AC\_0785', is highlighted in green. To the right of the dialog is a 3D model of a blue industrial pump with four red circular markers. At the bottom of the page are four red buttons: 'Add sensor', 'Empty', 'Partial Complete', and 'Finish'.

| Sensor Select                                |  |  |
|--|--|--|
| <input type="text" value="Search Sensor"/>   | <input type="button" value="🔍"/>           |  |
| <input type="button" value="D_AC_0785"/>     | <input type="button" value="F104779C_3A"/> | <input type="button" value="C_TA_0100"/> |
| <input type="button" value="LM_0301_02_00"/> | <input type="button" value="H_AC_1204"/>   | <input type="button" value="Z_AI_0755"/> |
| <input type="button" value="B_AC_1204"/>     | <input type="button" value="H_AI_0000"/>   | <input type="button" value="Y_TA_0010"/> |
| <input type="button" value="F100271H_1A"/>   | <input type="button" value="Z_TA_0100"/>   | <input type="button" value="E_TA_0044"/> |



# Machine Learning



# What's left to do?

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- Clean Up Design
- Create Confidence Intervals For Reports
- Display Previous Reports
- Allow For More Than 3 Types Of Rotational Equipment





# Questions?

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