

MICHIGAN STATE

UNIVERSITY

Beta Presentation

Dashboard for Data Visualization

The Capstone Experience

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Fall 2022



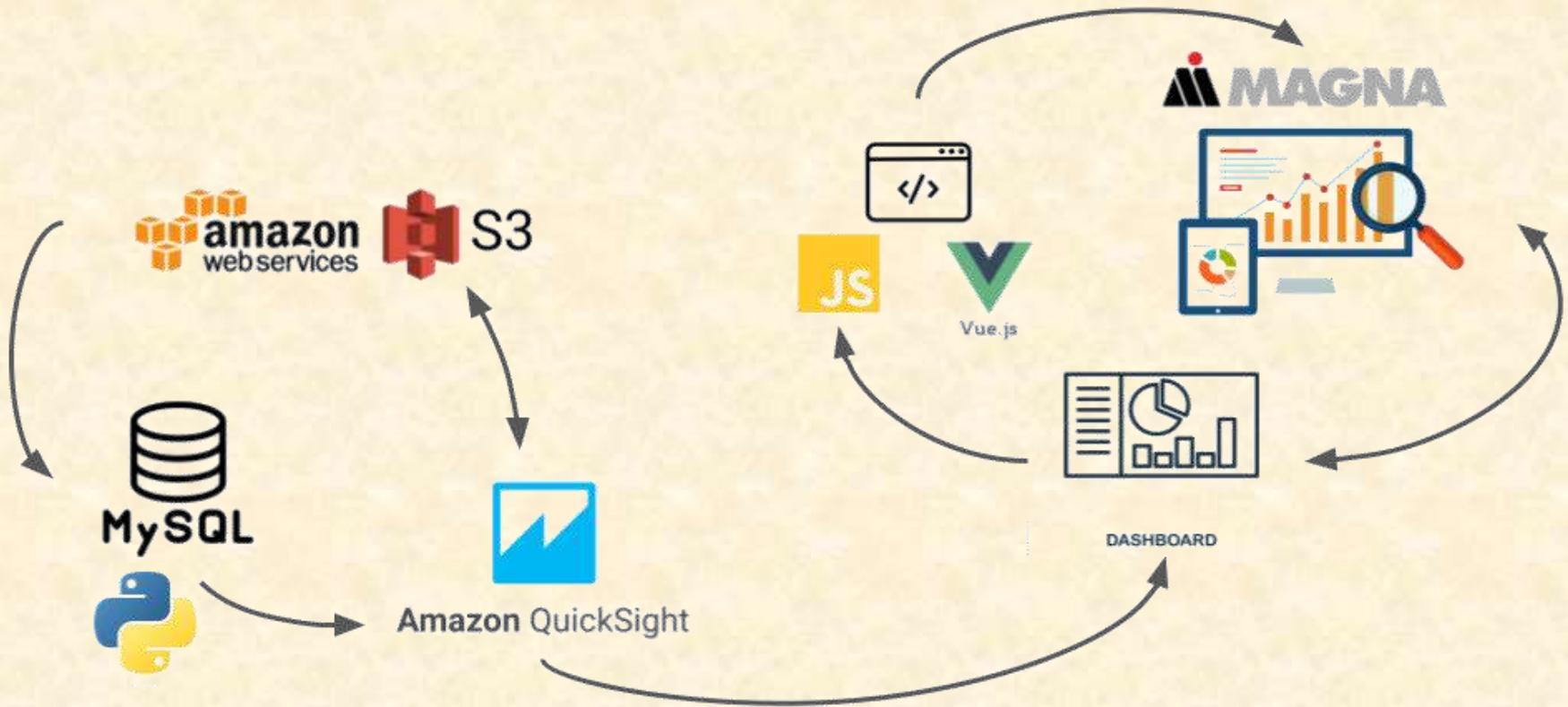
*From Students...
...to Professionals*

Project Overview

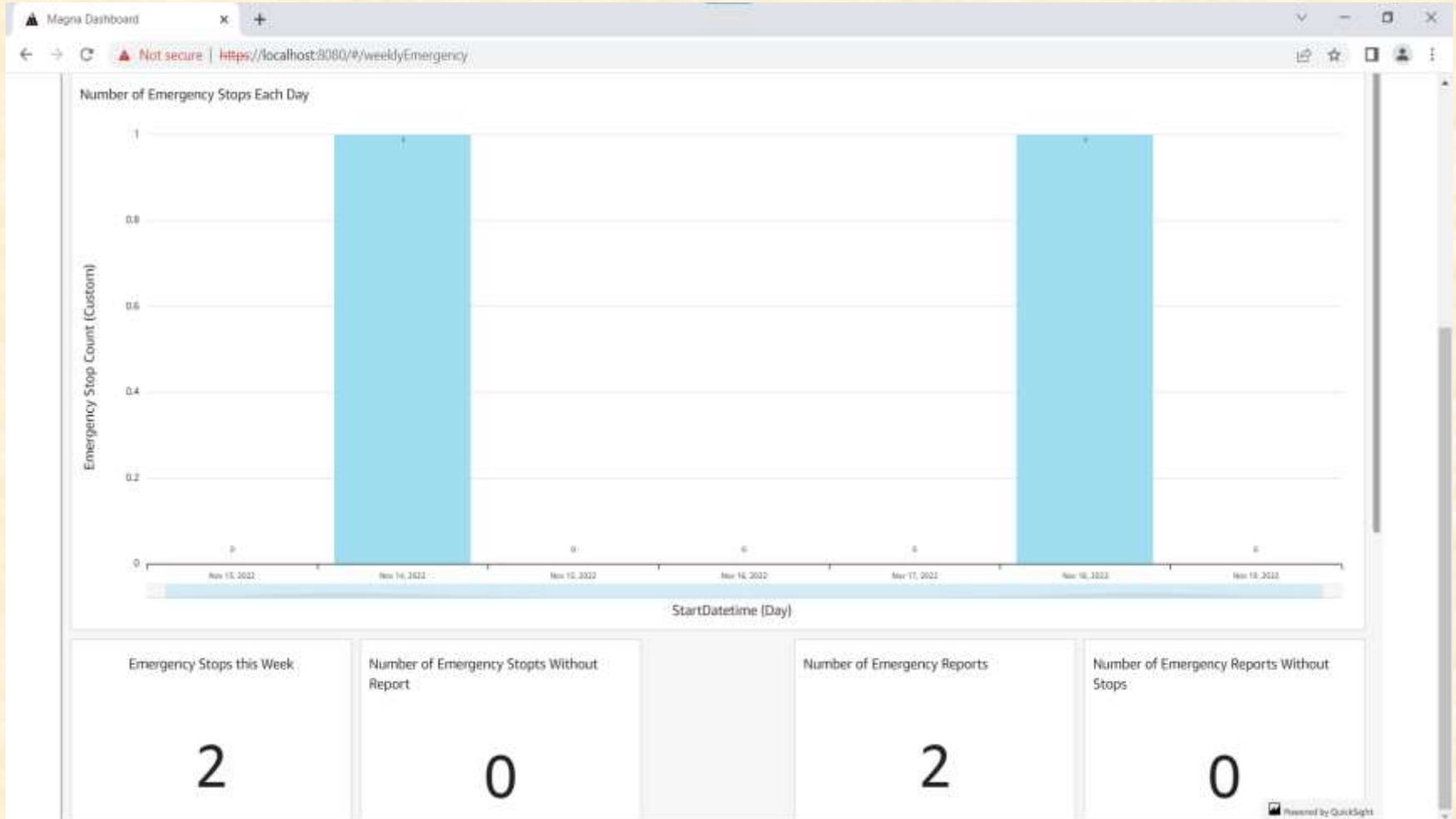
- Increase accessibility to deliver robot fleet data
- Provide daily updates on the status of bot fleet or individual robots
- Display fleet history for analysis
- Allow for management of fleet by filtering data



System Architecture



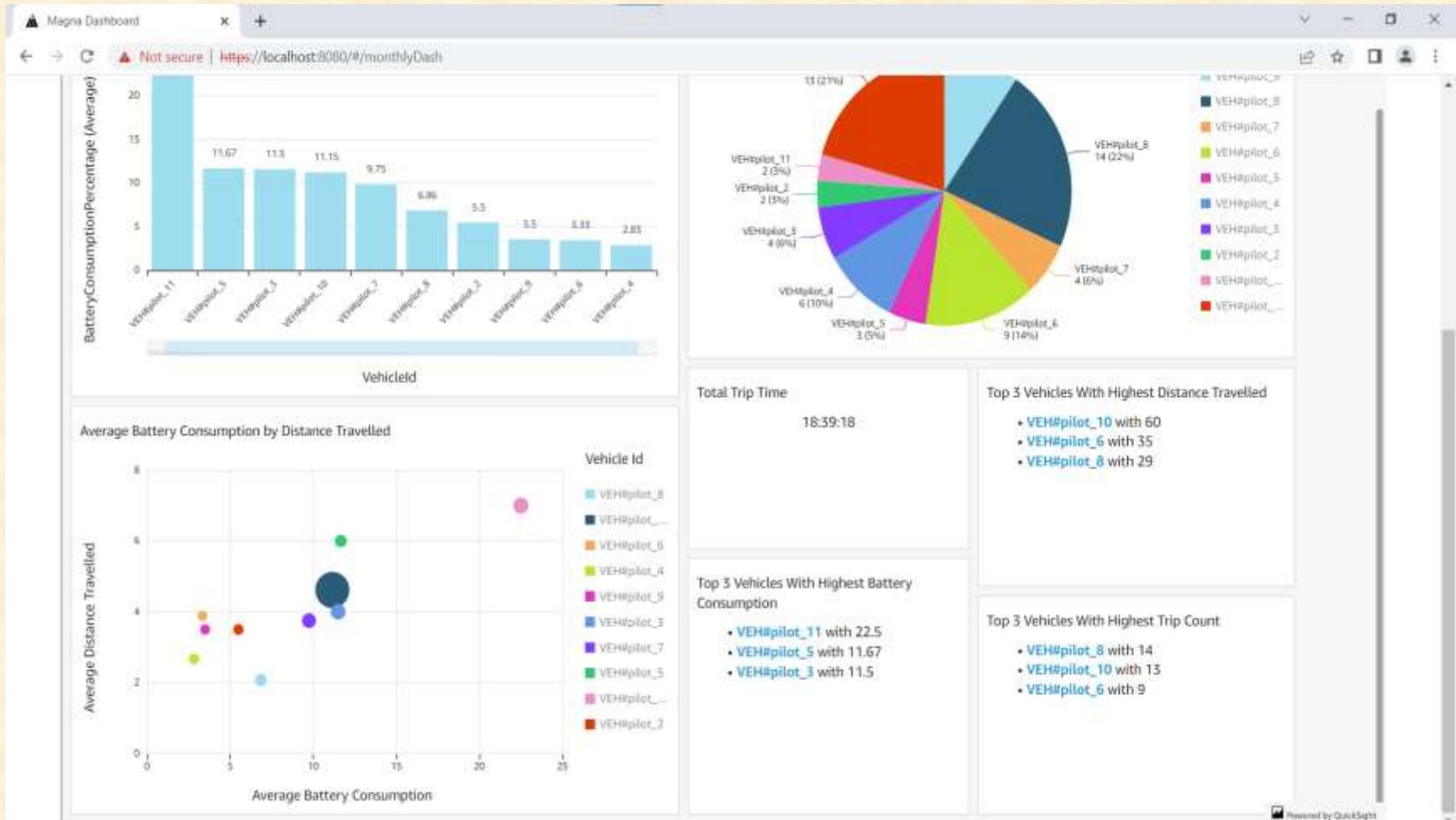
Emergencies



Deliveries: Comparison of Vehicles



Deliveries: Faulty Batteries



Error Checker

Magna Dashboard

Not secure | https://localhost:8080/#/DeliveryChecker

MAGNA Deliveries Emergency Stops Delivery Errors Vehicle Logs Logout (admin@magna.com)

Delivery Checker

| Vehicle ID | Start Date | End Date | Start Time | End Time | Trip Time | Distance Travelled | Average Speed | Battery Consumption Percentage | Emergency Stop Occurred | Emergency Report Occurred |
|--|---------------------|---------------------|------------|----------|-----------|--------------------|---------------|--------------------------------|-------------------------|---------------------------|
| VEH#pilot_2 | 2022/10/01 6:17:36 | 2022/10/01 8:49:38 | 0 | 0 | 9122270 | 0.98412871 | 1.078819976 | 68 | FALSE | FALSE |
| High Battery Consumption Low Distance Travelled | | | | | | | | | | |
| VEH#pilot_8 | 2022/10/01 8:53:38 | 2022/10/01 11:43:45 | 0 | 0 | 10207109 | 9.91977748 | 9.718498627 | 42 | TRUE | TRUE |
| High Distance Travelled | | | | | | | | | | |
| VEH#pilot_10 | 2022/10/01 3:37:44 | 2022/10/01 6:27:44 | 0 | 0 | 10200025 | 1.753984786 | 1.719588713 | 60 | FALSE | FALSE |
| High Battery Consumption Low Distance Travelled | | | | | | | | | | |
| VEH#pilot_10 | 2022/10/01 11:47:28 | 2022/10/01 11:47:33 | 0 | 0 | 4799 | 0.002015148 | 4.199099377 | 0 | FALSE | FALSE |
| Low trip time | | | | | | | | | | |
| VEH#pilot_4 | 2022/10/02 7:34:25 | 2022/10/02 10:01:36 | 0 | 0 | 8830653 | 1.030575915 | 1.167043836 | 55 | TRUE | TRUE |
| High Battery Consumption Low Distance Travelled | | | | | | | | | | |
| VEH#pilot_4 | 2022/10/02 19:29:51 | 2022/10/02 22:21:11 | 0 | 0 | 10280595 | 8.153159937 | 7.930630413 | 42 | TRUE | TRUE |



What's left to do?

- Features
- Stretch Goals
 - Email PDF of dashboards to employees
 - Plot the emergencies on a map
 - Polish error checker
- Other Tasks
 - Integrate the dashboards in Magna's website



Questions?

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