Beta Presentation
Ford Accelerate Monitor

The Capstone Experience

Team Ford

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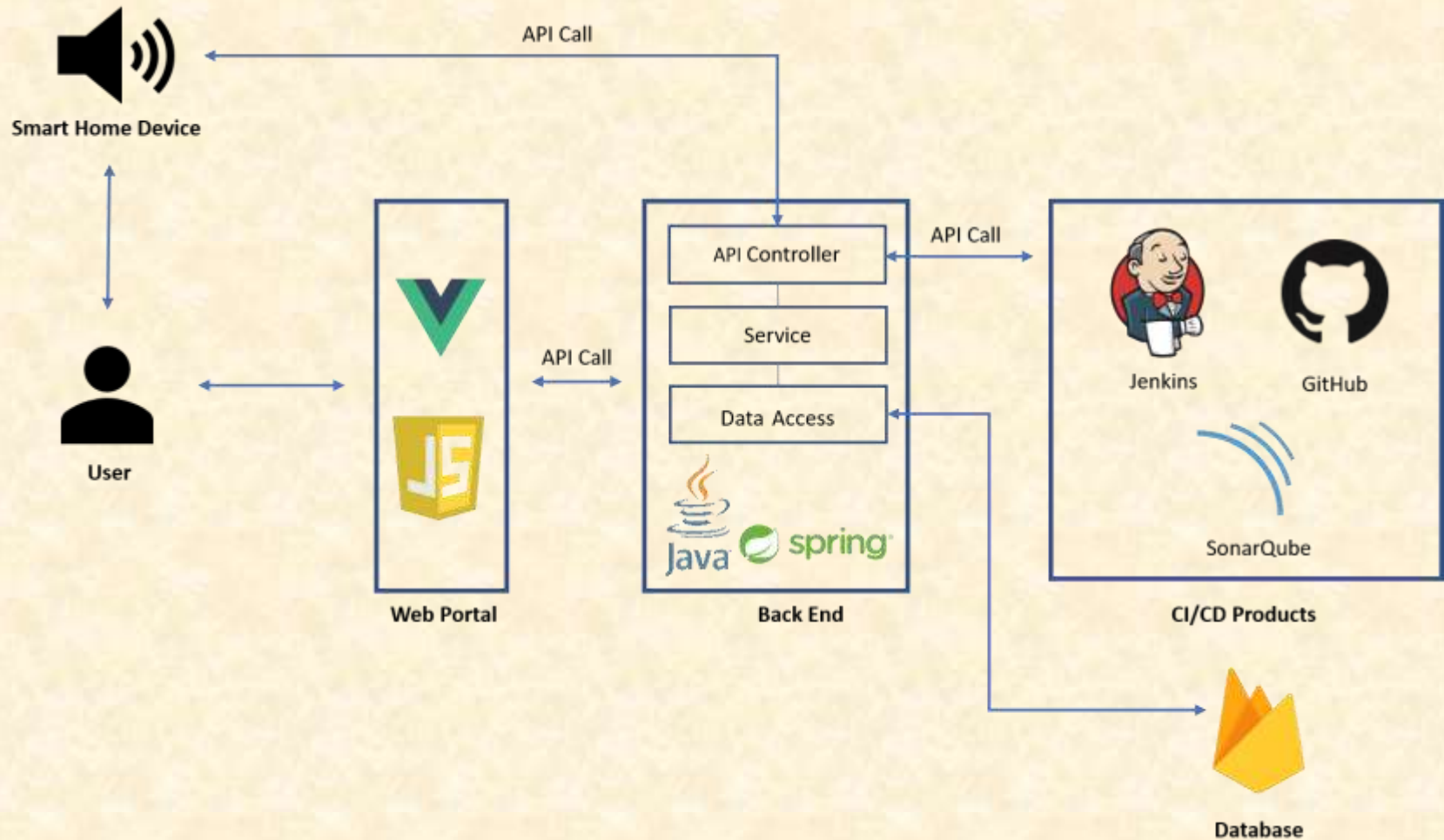Michigan State University
Fall 2020

From Students…
…to Professionals
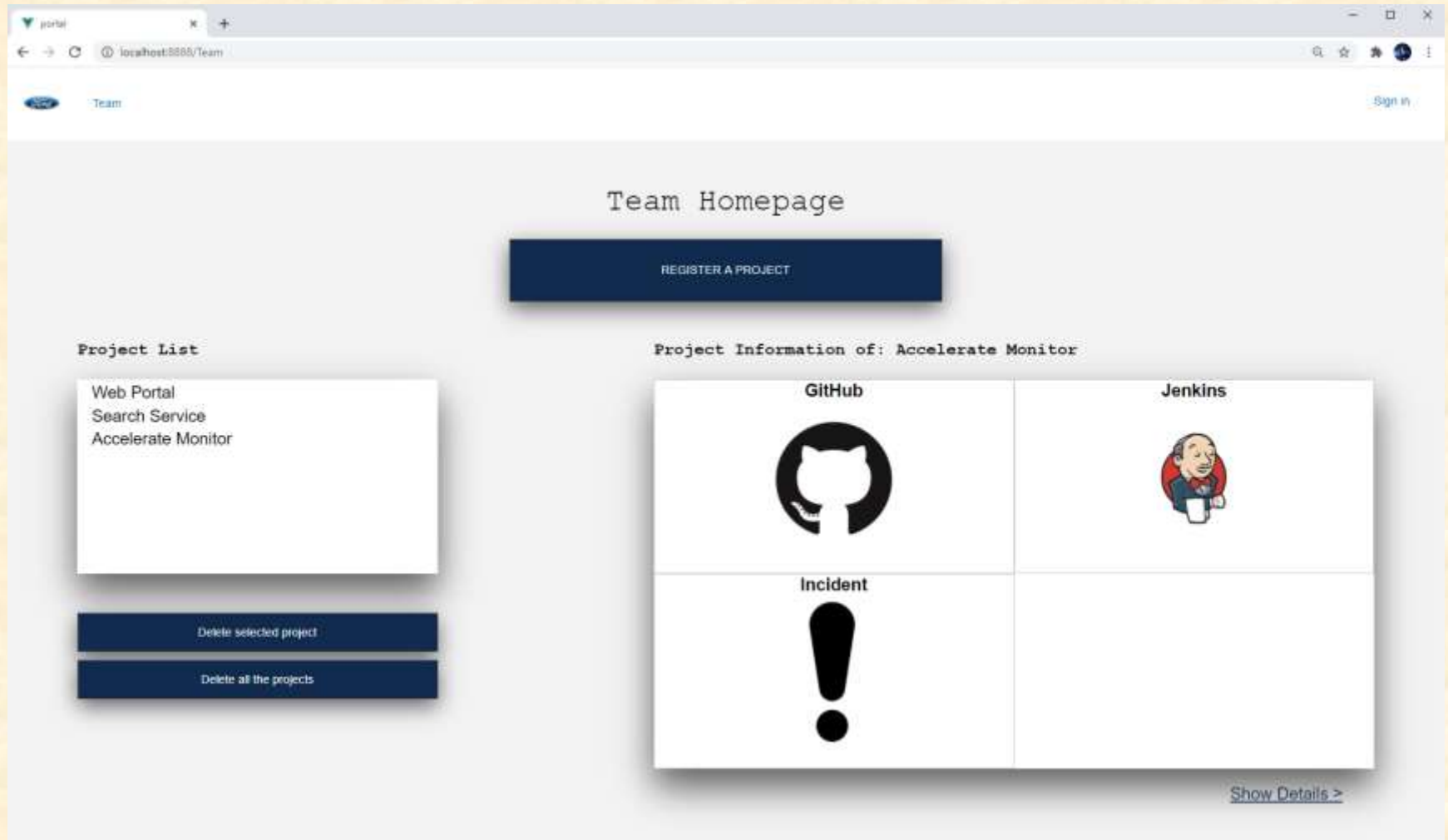
Project Overview

- Web Portal
  - Register teams, projects and products
  - Statistics dashboard
- CI/CD Product Integration
  - Jenkins, GitHub, and SonarQube (stretch)
  - Software statistics calculated with data from products
- Smart Home Device Skill
  - Google Assistant and Alexa (stretch)
  - Retrieve software statistics for their team or project by asking structured questions
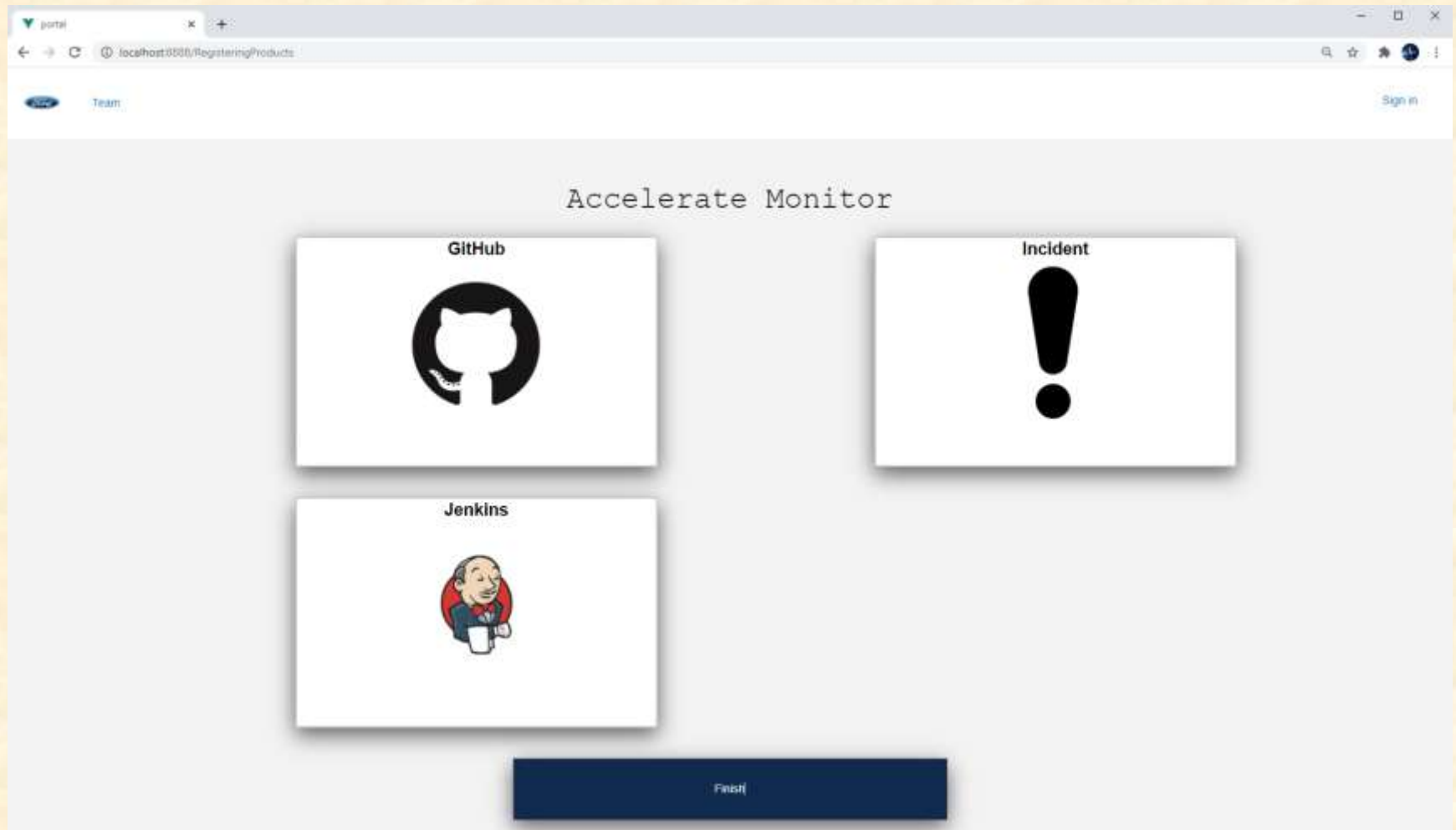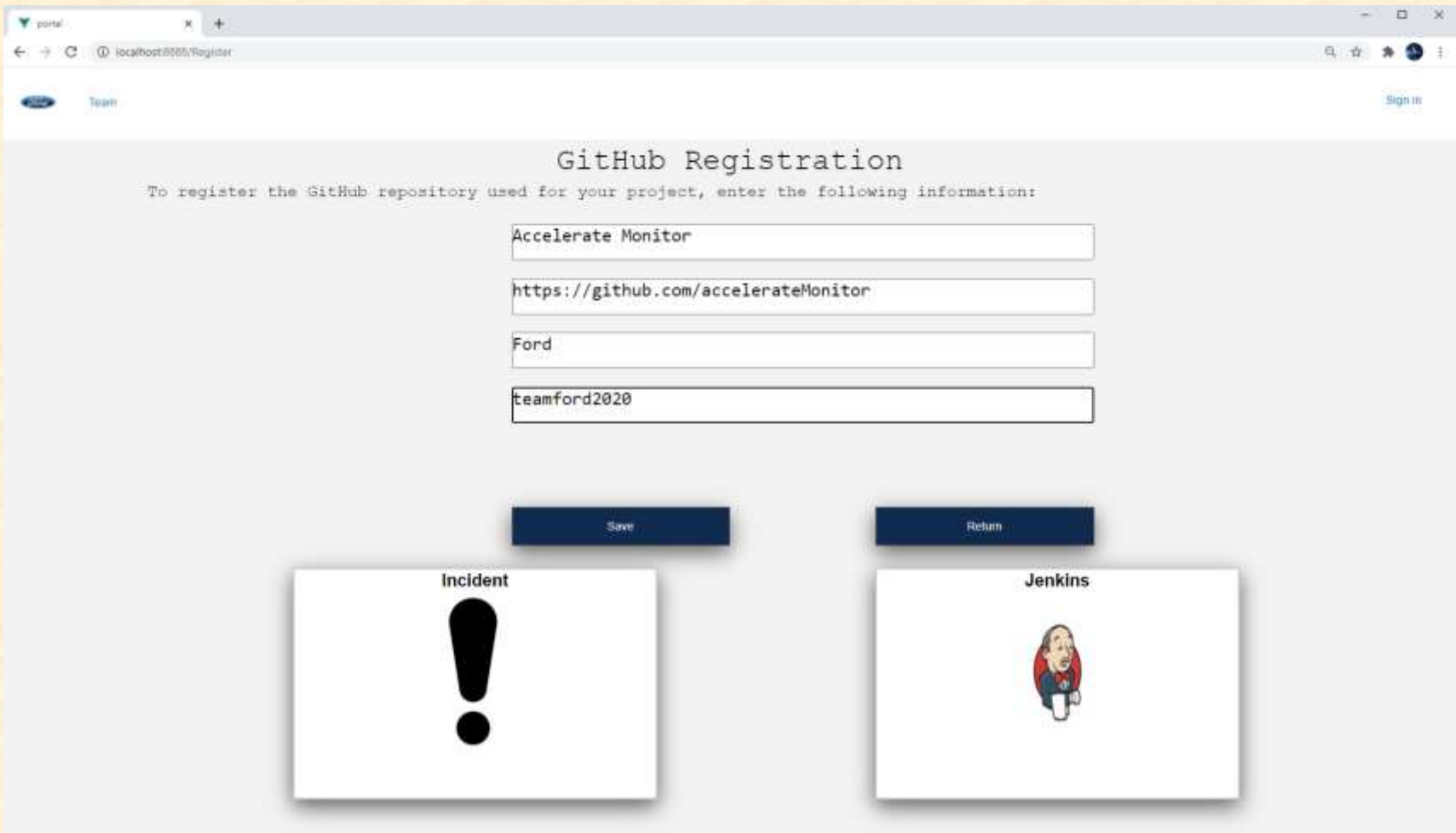
System Architecture

Team Homepage

Product Registration Hub

GitHub Registration Page
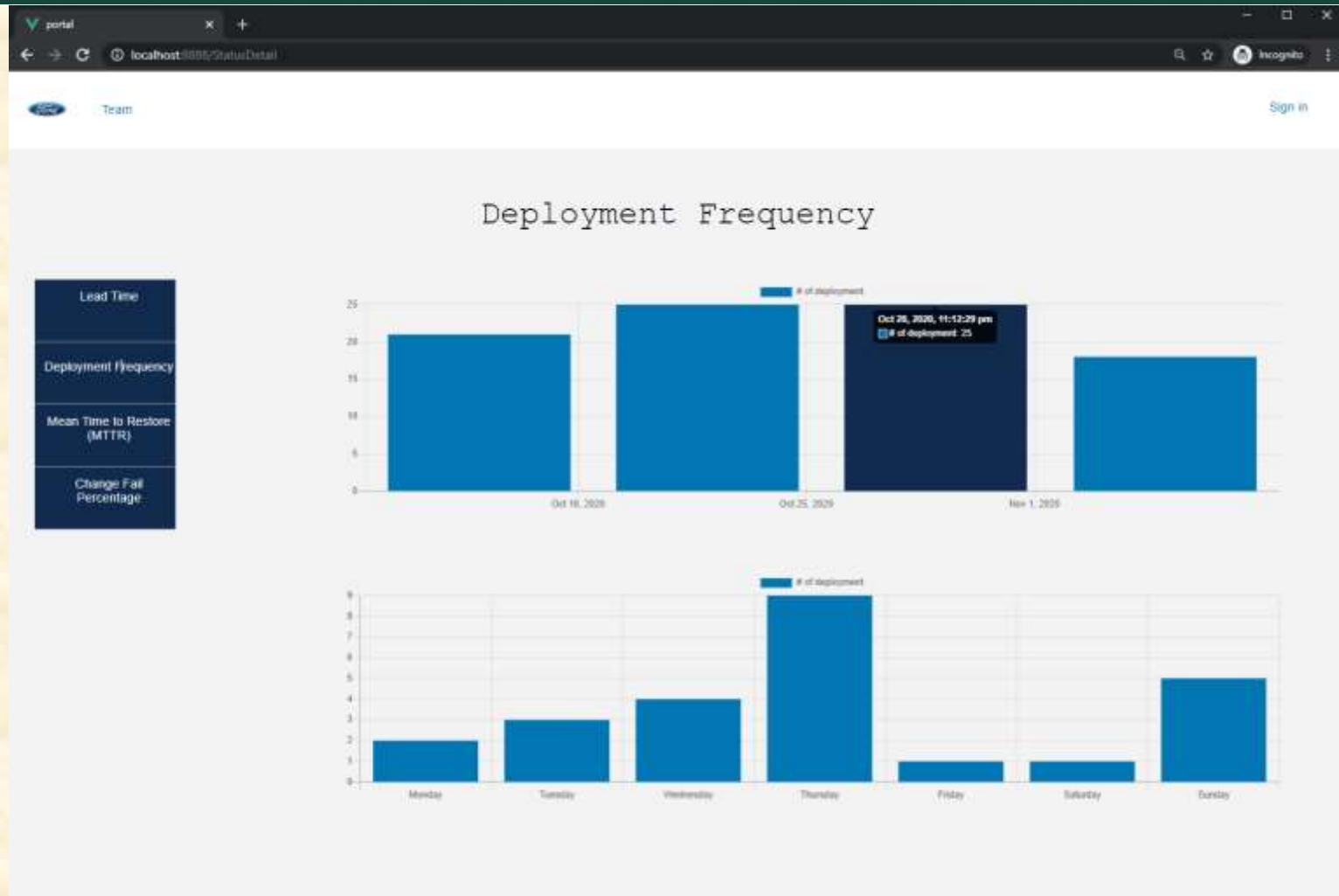
Deployment Frequency Calculation

-MJiM5VRAhBv5tGhh_pz
- commitID: "ad5f42a9725cf221fe2c6057dedf5c090a5143cc" ← Commit SHA
- date: "2020-09-16 23:11:05 EDT" ← Build Timestamp
- deployment: true ← Deployment?
- env: "PROD" ← Environment
- projectName: "jenkins-test" ← Registered Name
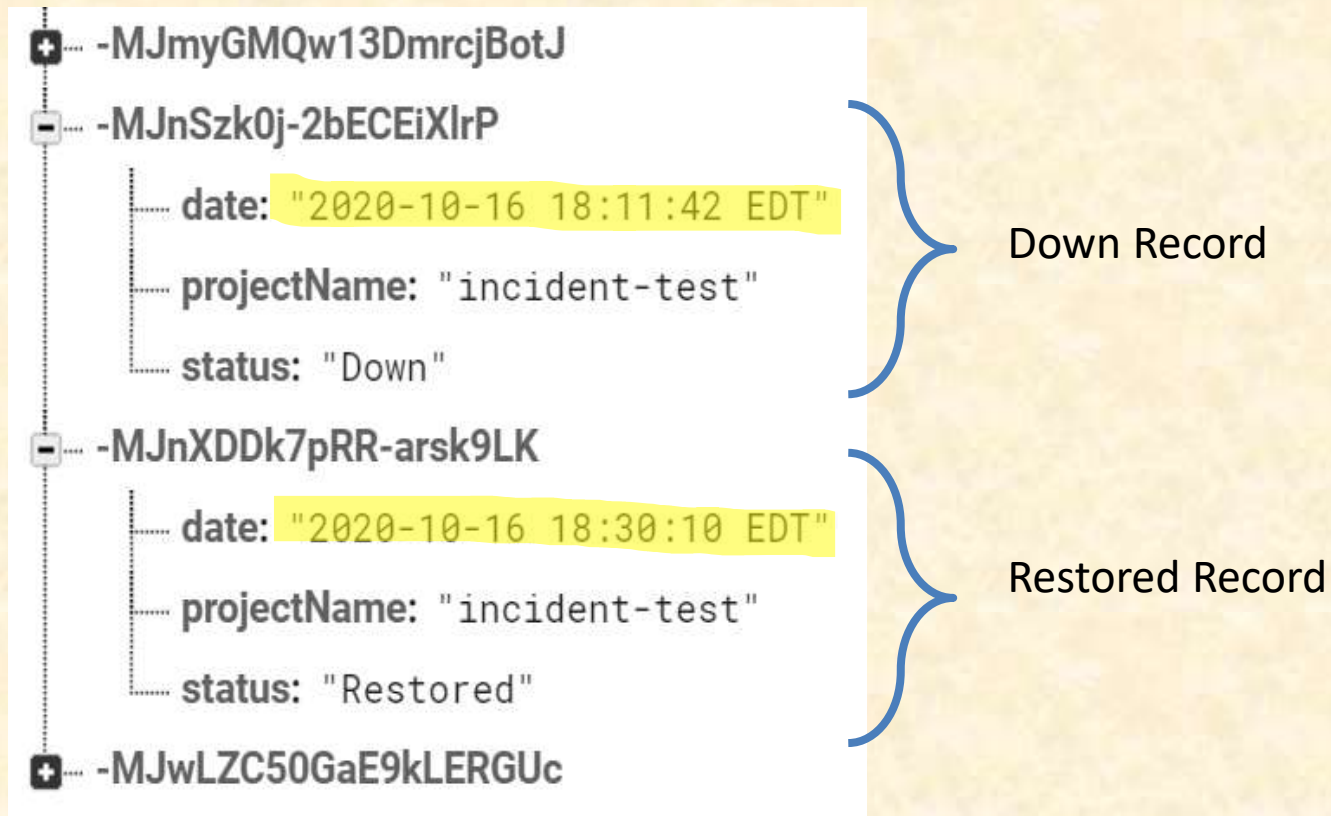- status: "FAILURE" ← Build Result

Build Record in Database

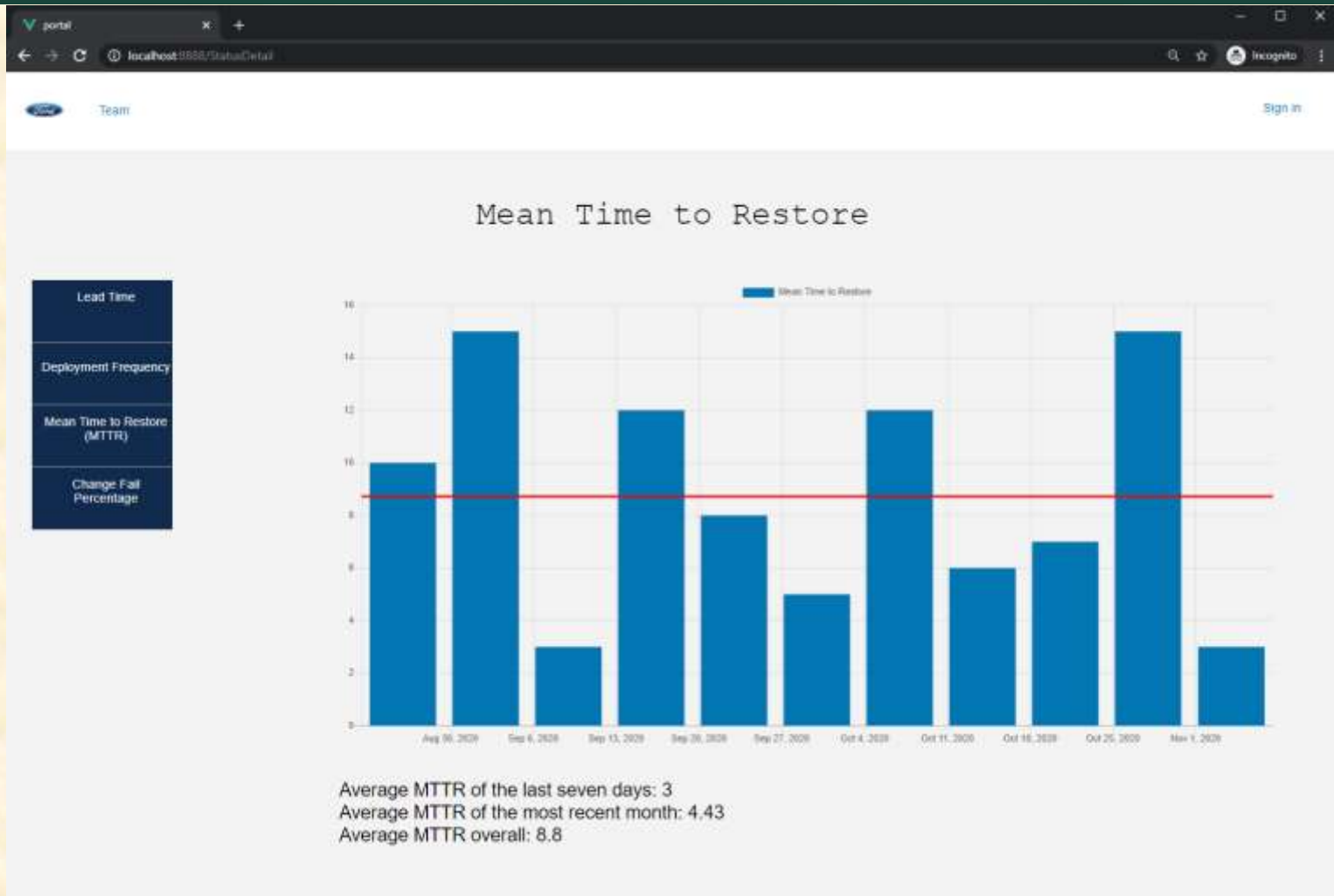# Deployment Frequency Graph

Mean Time To Restore Calculation

Incident Record in Database

Mean Time To Restore Graph

Lead Time Calculation

1600867462000:cfp-test-1
    commitID: "b852af55b7a61a3838bdc70acbefa1981e316029"
    date: "2020-09-23 09:24:22 EDT"
    deployment: true
    env: "PROD"
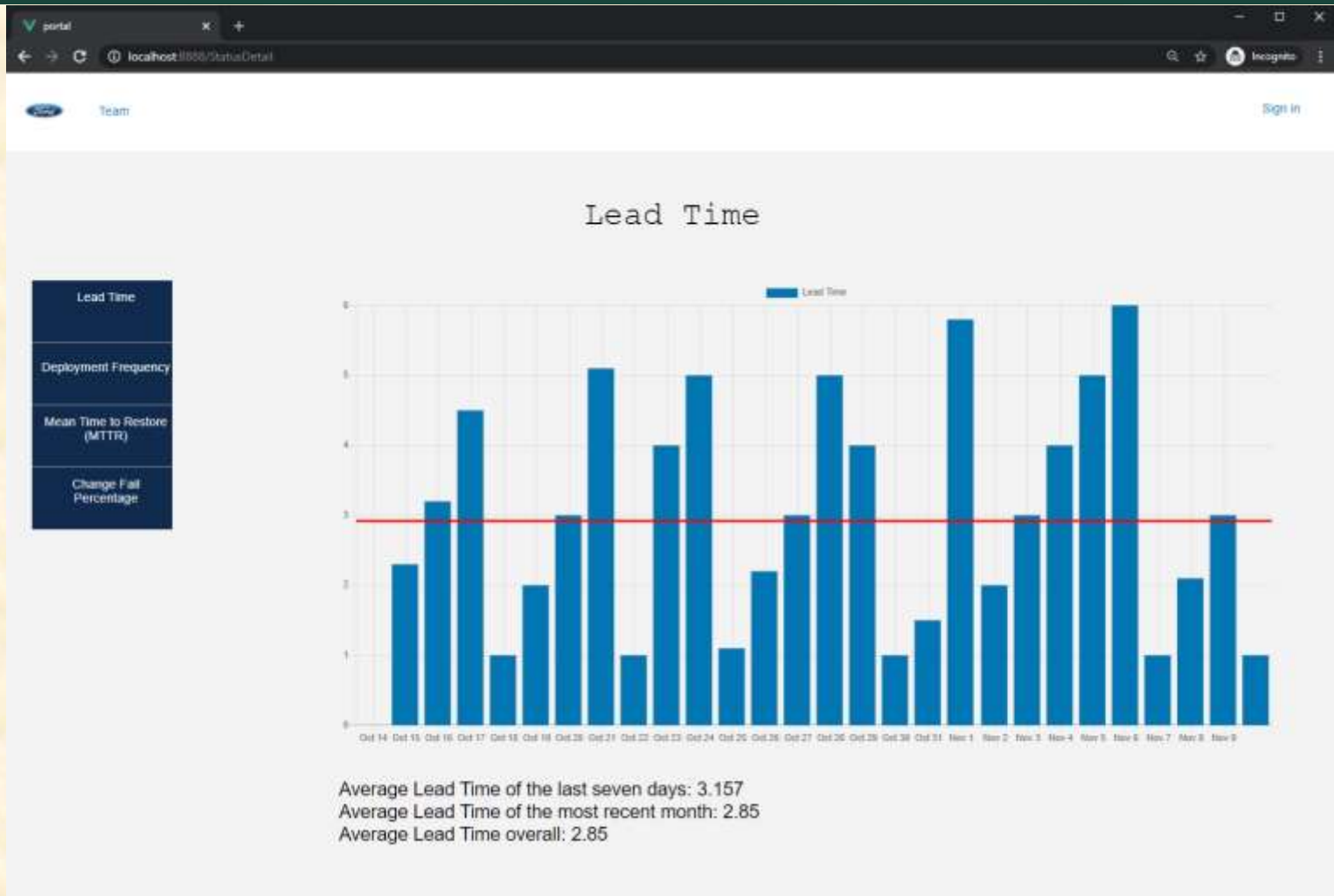   projectName: "cfp-test-1"
    status: "SUCCESS"

Build Record in Database

1600868470000:cfp-test-1
    date: "2020-09-23T09:41:10Z"
    projectName: "cfp-test-1"
    sha: "b852af55b7a61a3838bdc70acbefa1981e316029"
    user: "elekom"

Commit Record in Database

Lead Time Graph

Change Fail Percentage Calculation

```
}, {
  "commitID" : "7479125b4eecdef373d25e704553393e18aec0ed",
  "date" : "2020-09-20 19:32:46 UTC",
  "deployment" : "true",
  "env" : "PROD",
  "projectName" : "cfp-test-4",
  "status" : "SUCCESS"
}, {
  "commitID" : "f1d78e3fd4a558e07e8a5cfa7928dbb9dc5bcd87",
  "date" : "2020-09-21 01:54:38 UTC",
  "deployment" : "true",
  "env" : "PROD",
  "projectName" : "cfp-test-4",
  "status" : "SUCCESS"
}, {
  "commitID" : "7479125b4eecdef373d25e704553393e18aec0ed",
  "date" : "2020-09-21 03:00:22 UTC",
  "deployment" : "true",
  "env" : "PROD",
  "projectName" : "cfp-test-4",
  "status" : "SUCCESS"
}, {
```
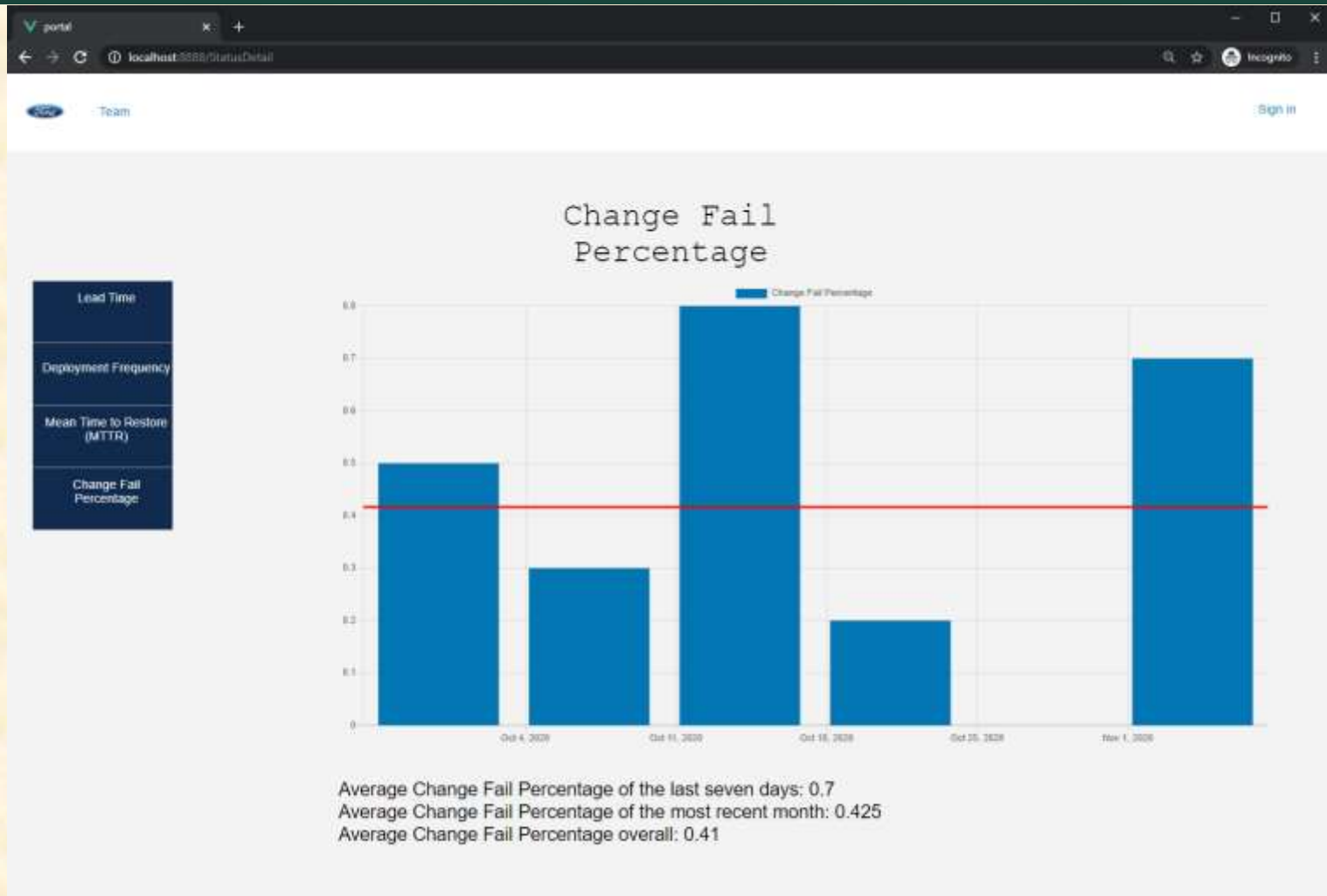
Failure

Build Records in Database
Exported and formatted for display

Change Fail Percentage Graph

What's left to do?

- Testing
  - More variety of data
  - Stress testing
- Fix bugs
  - Build failure notification trigger
  - Error handling
- Update web portal design
- Package software for handoff

Questions?

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