

MICHIGAN STATE
UNIVERSITY

Alpha Presentation

Railroad Physics Data Visualization

The Capstone Experience

Team Union Pacific

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From Students...
...to Professionals

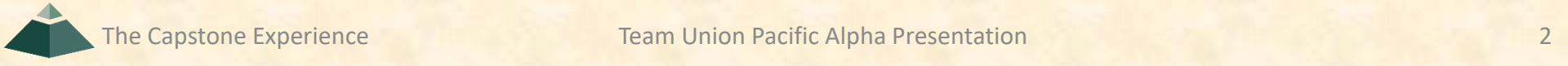
Department of Computer Science and Engineering
Michigan State University
Fall 2019

Project Overview

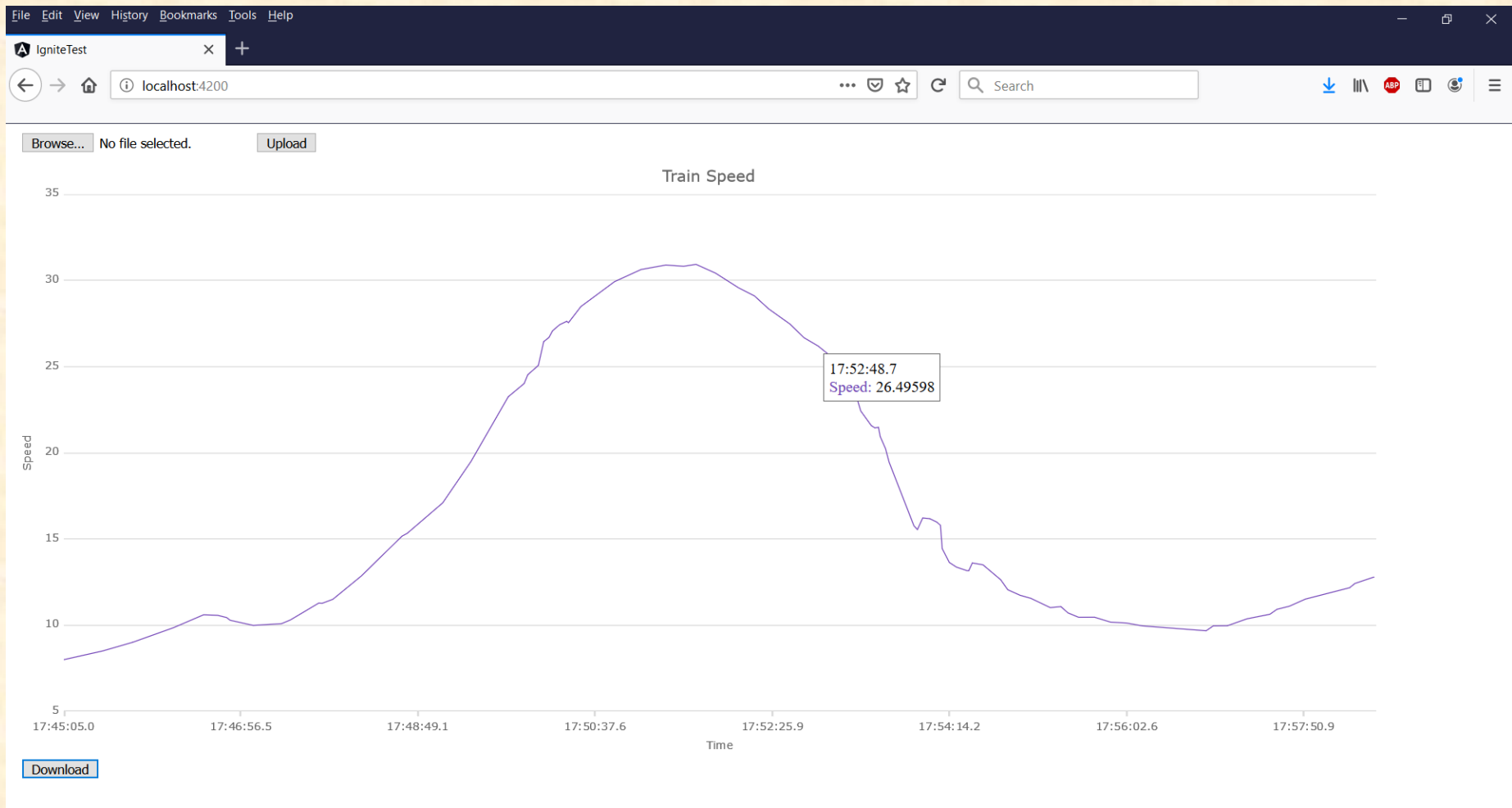
- PS Technology has a Unity physics engine that simulates train operation and records varying data points
- They need a way to process the outputted CSV data file into a graphical output to help improve diagnostics on the simulation run
- Our solution will create a web-based user interface that accepts the CSV files and displays the graphical output on both the web UI and in a downloadable Excel file



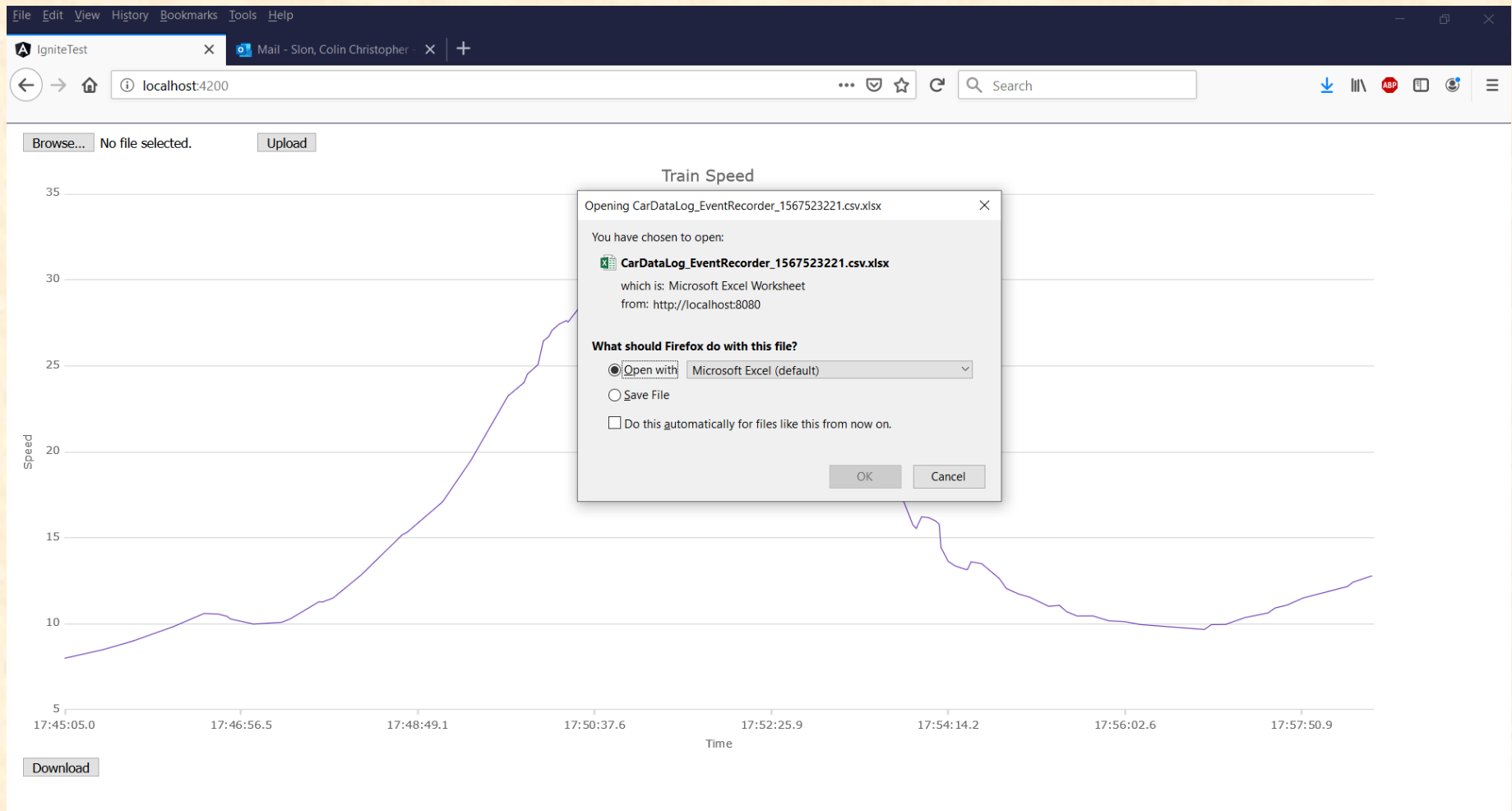
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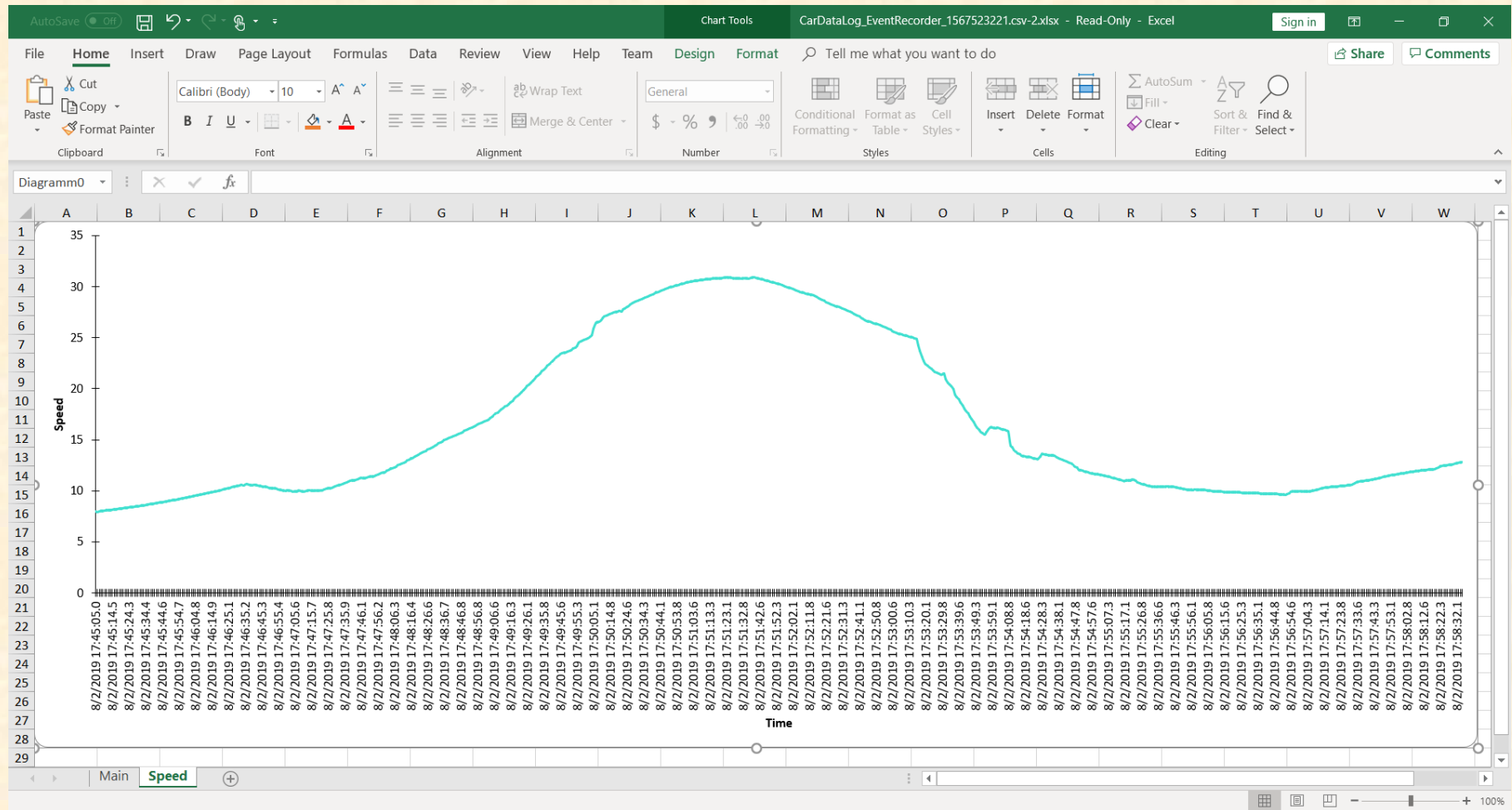
Web UI Interactable Graph



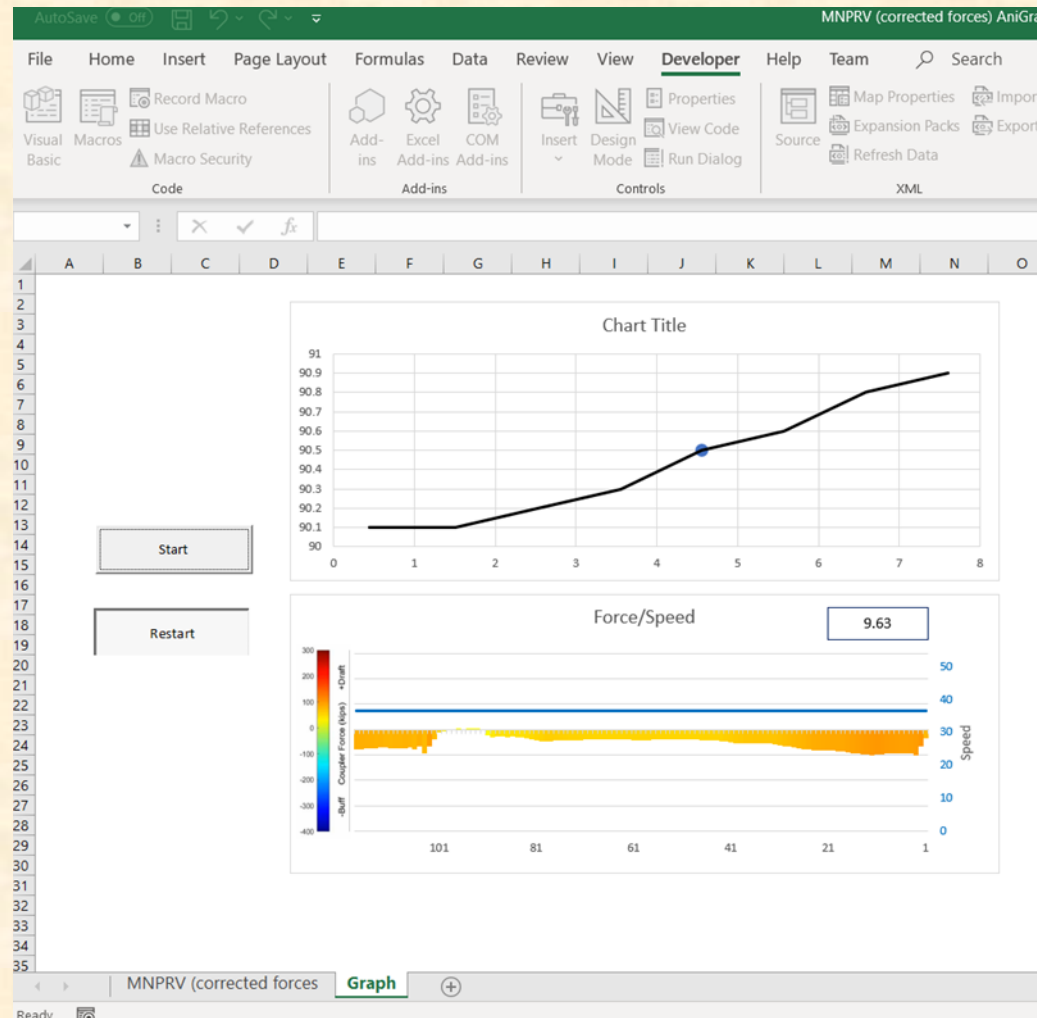
Download Feature



Generated Excel Workbook



Animated Graph



What's left to do?

- Finish data validation API
- Create Angular components for the remaining graphs
- Generate remaining graphs for Excel files
- Integrate animated graphs on both the web UI and in the Excel files
- Connect UI to database

Questions?

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