

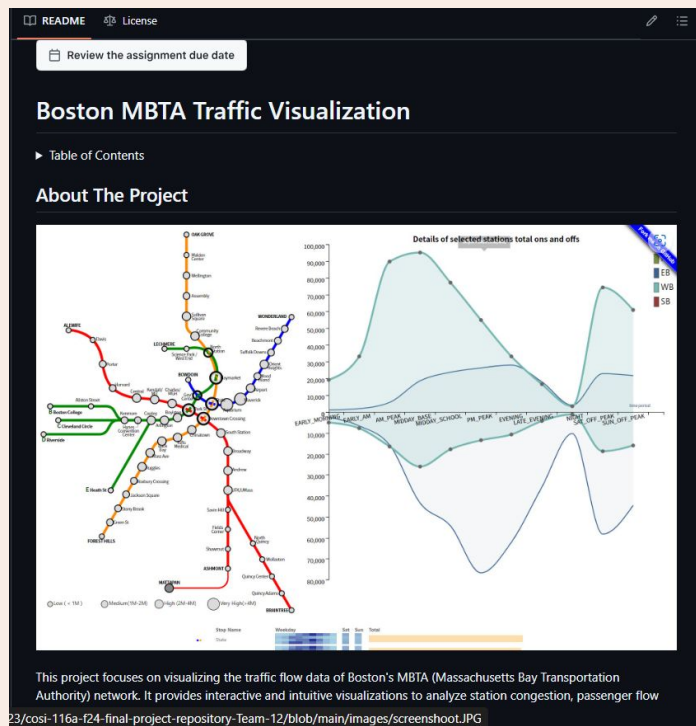
# Project Team # 12:

Navigating Boston—interactive MBTA ridership/flow by time

Team member:

Han Wu, Quinn Zhong,  
Qiping Zhang, Ziming Zeng

COSI 116A --- Prof. Dylan  
Cashman, Brandeis University



# Project Motivation and Objectives

- Motivation:
    - Address MBTA ridership, congestion, and improvement opportunities.
  - Objectives:
    - Provides insights into Boston's public transportation.
    - Analyzing flow differences by time and route.
    - Identify ridership patterns.
    - Supporting informed transportation planning decisions.
-

# Technologies Used

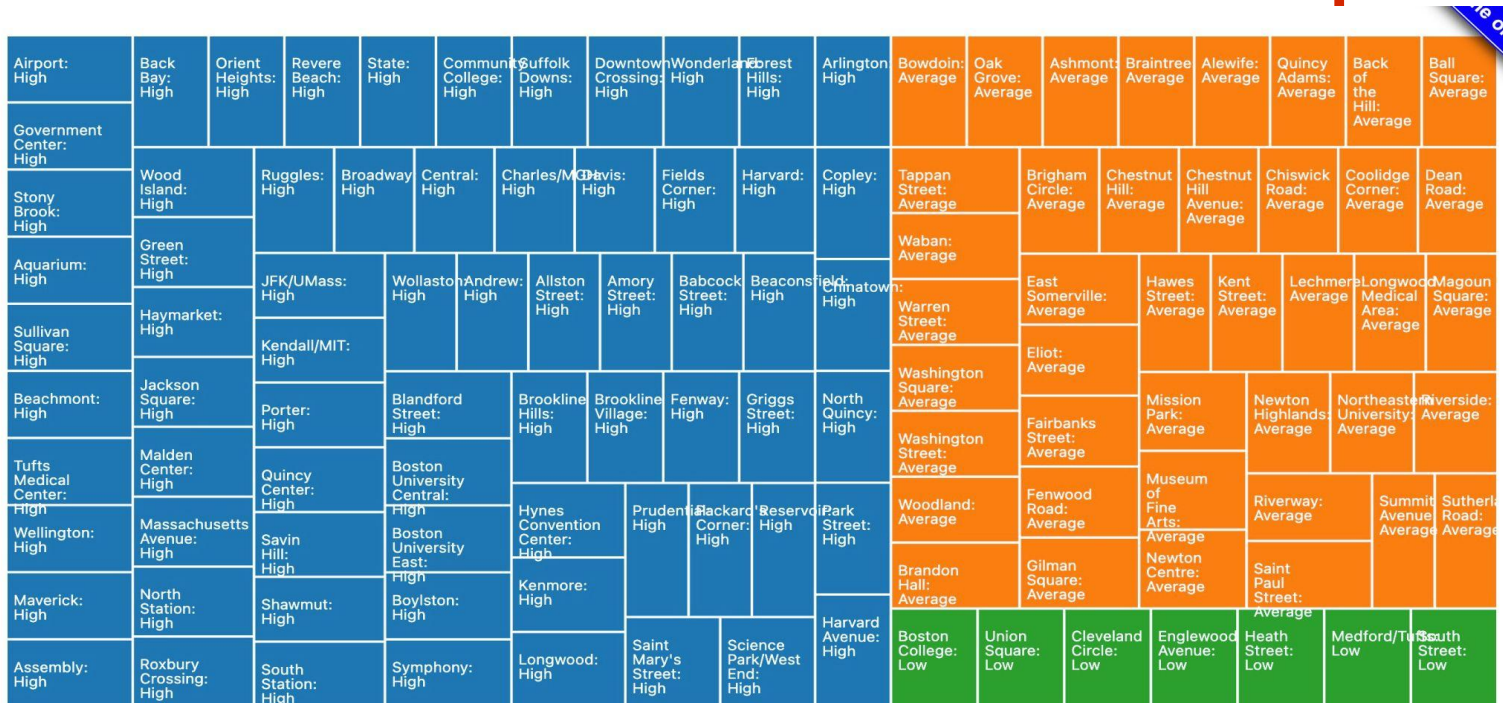
- D3.js for interactive visualizations
- HTML/CSS for webpage structure and styling
- JavaScript modules for specific visualizations

# About Features...



- 1 Interactive MBTA Map with station-linked chart
- 2 Line Chart for passenger flow trends over time
- 3 Bar Chart for detailed flow statistics
- 4 Tree Map categorizing stations by traffics
- 5 Tooltip for enhanced interactivity

# Visualizations: Treemap



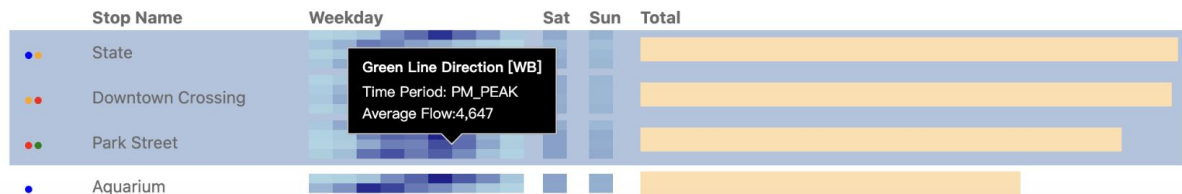
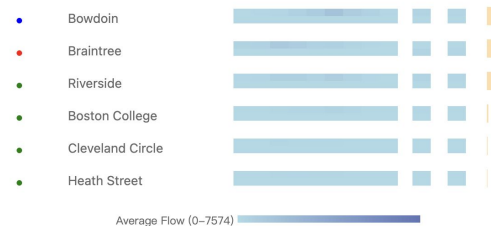
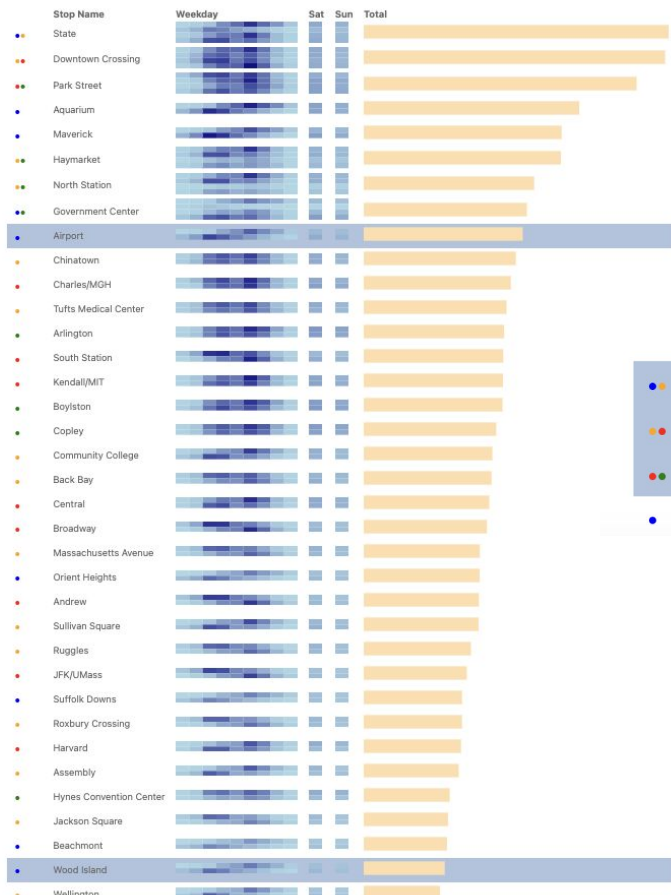
- categorizing stations into High, Average, and Low traffic groups
- hierarchical structure to group stations with similar ridership patterns

# Visualizations: Mbta Map



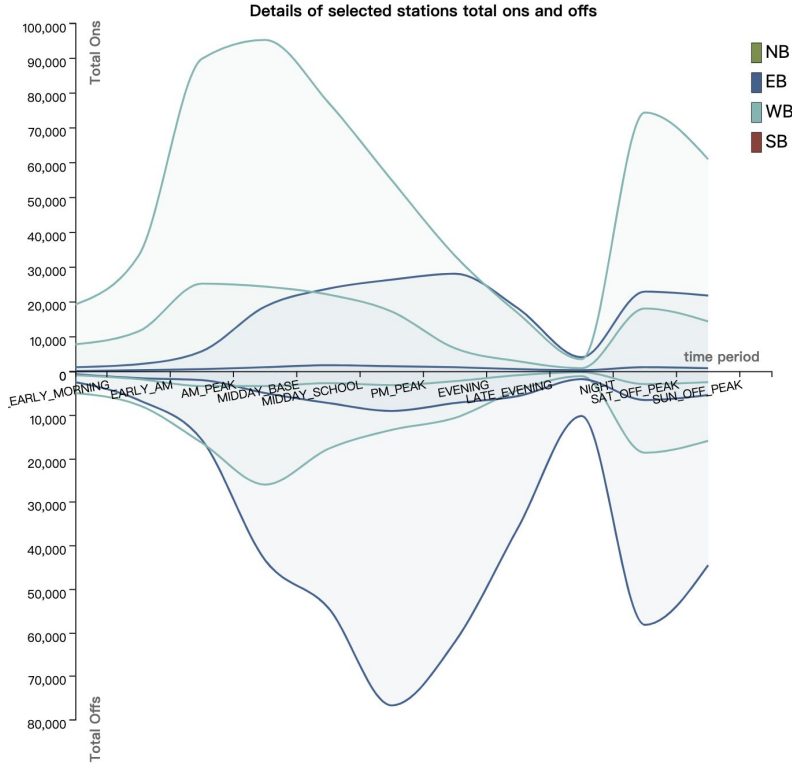
1. Circles
2. Size
3. Drag to select

# Visualizations: Bar/table Chart

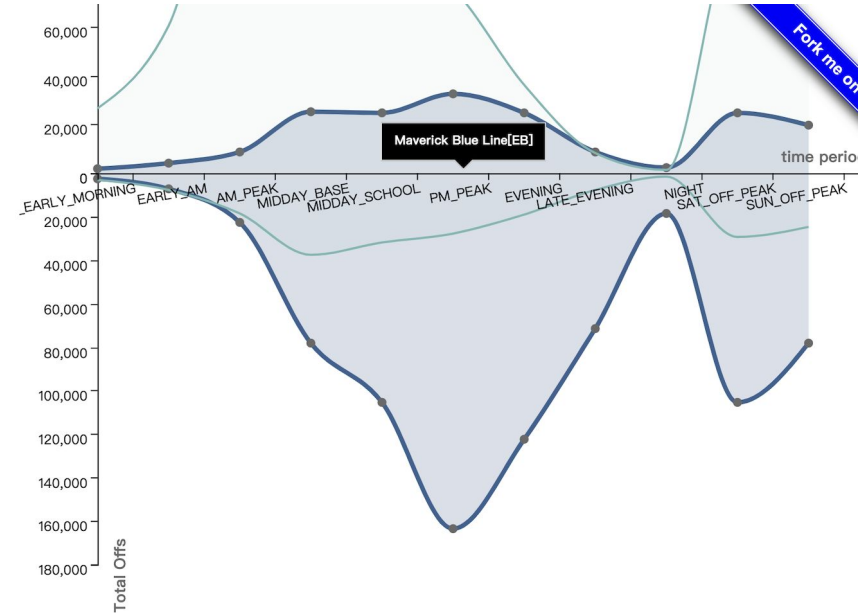


1. bars/rects
2. colors
3. highlight

# Visualizations: Line chart

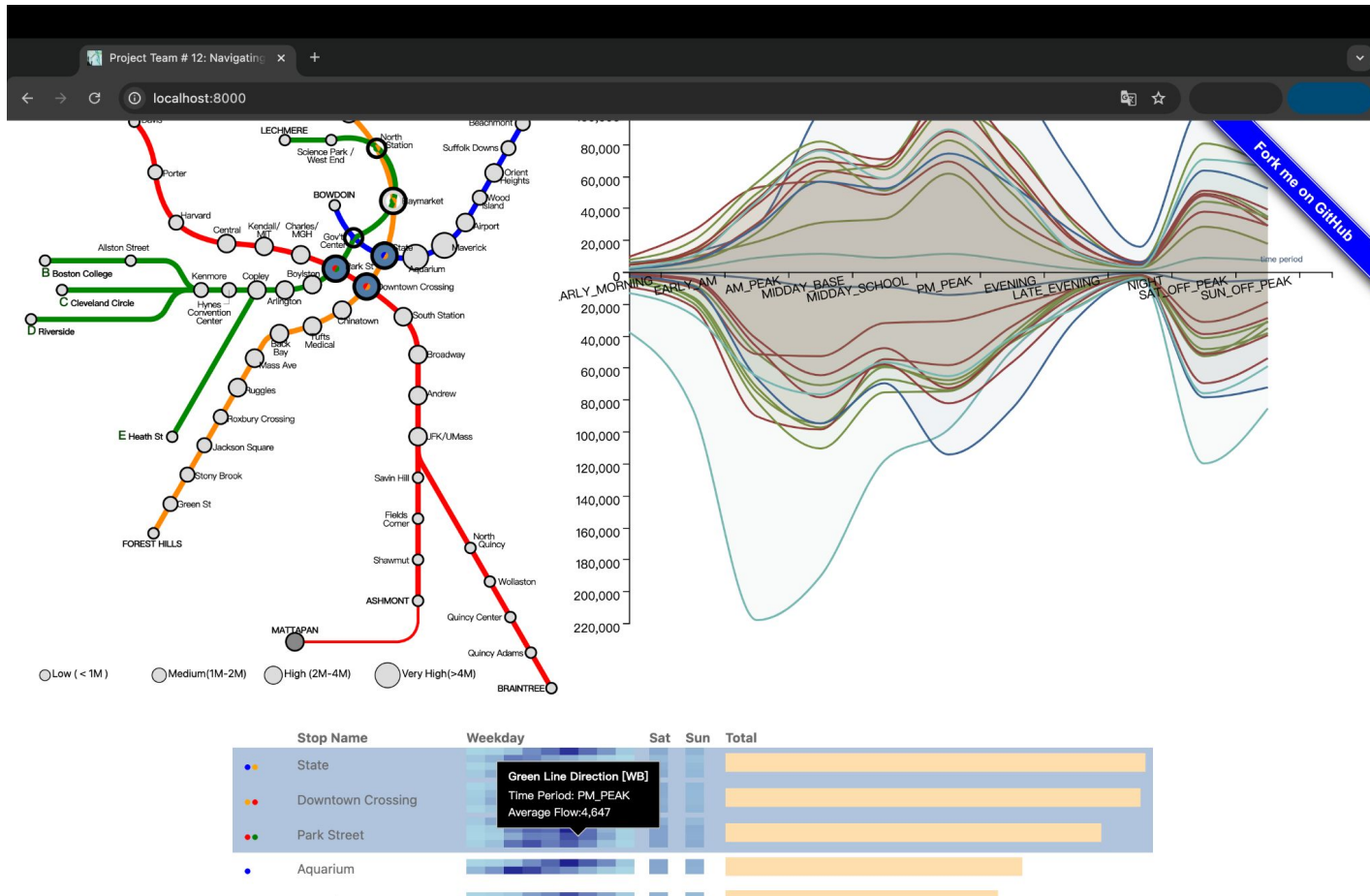


1. Lines, colors
2. axis

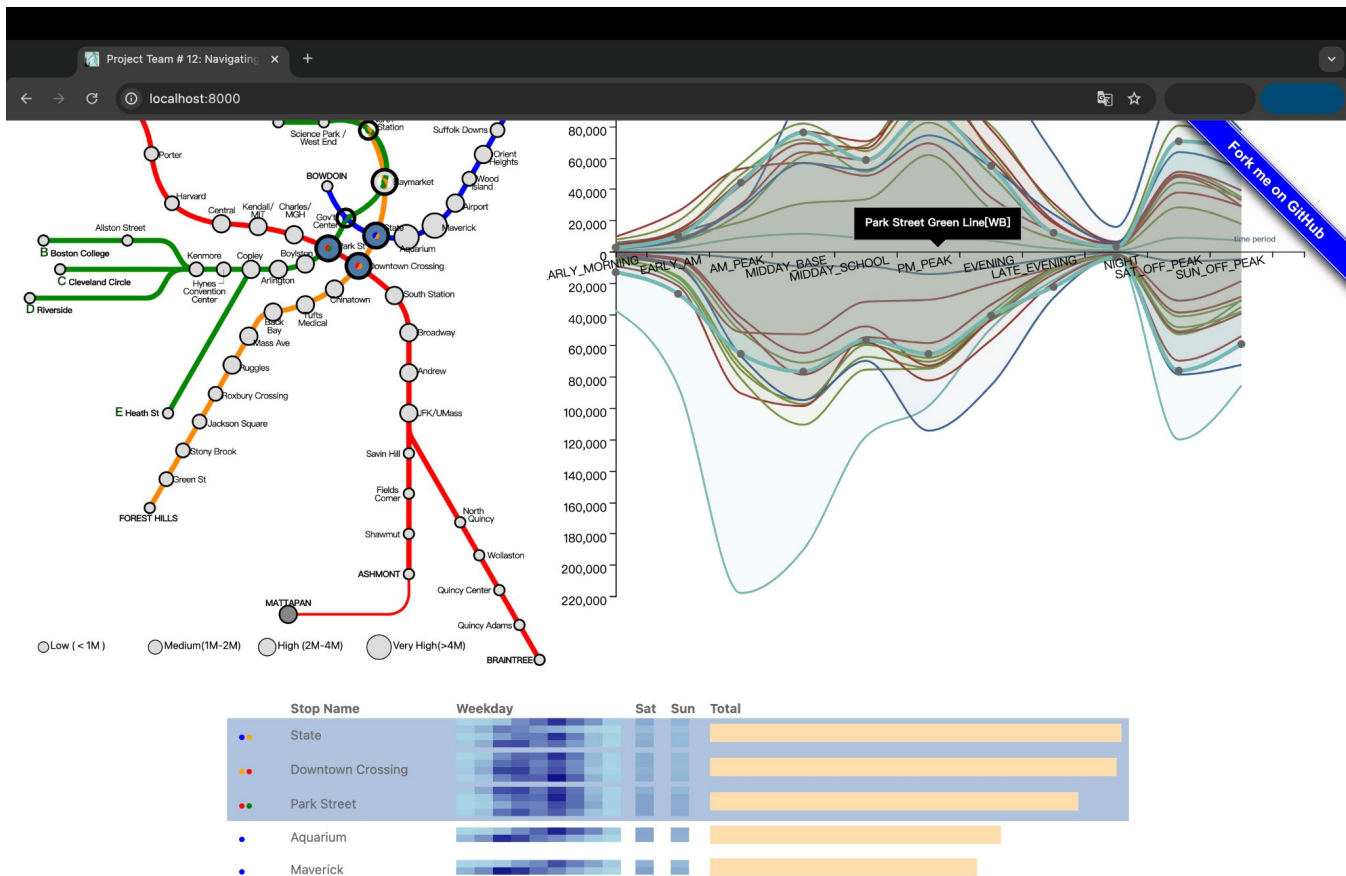




# Visualizations: overview



# Visualizations: overview



# Usage

- Interactive Map
- Tootips
- Trend Analysis
- Pattern Recognition



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Project-Template created  
by GitHub Classroom](#)

# Future Enhancements

- Enhanced Interactivity
- Dynamic Filtering
- Real-time traffic data integration
- Predictive Analytics
- Mobile Optimization



# DATA

## Sources:

- MBTA Rapid Transit SVG Map
- MBTA Ridership Data

## Preprocessing:

- Total flow calculation
- Data filtering and grouping by station and time



Thank You!