

## **Deliverable 0**

### **Project Members (Name, Email, Github, Class Year):**

- Taesung Yoon, [tsyoon@bu.edu](mailto:tsyoon@bu.edu), @yoontsy2000, Class of 2024
- Jin Young Bang, [jybang@bu.edu](mailto:jybang@bu.edu), @jinyoungbang, Class of 2024
- Minh Le: [minhle@bu.edu](mailto:minhle@bu.edu), @lqm181, Class of 2024
- Katherine Rimey: [rimey@bu.edu](mailto:rimey@bu.edu), @KTRimey, Class of 2024
- Duc Minh Nguyen, [nguyemi01@bu.edu](mailto:nguyemi01@bu.edu), Github: nguyemi01, Class of 2023

### **What is the project focus/overall goal?**

- Analyze MBTA bus data to understand and report on bus route performance.
- Identify disparities in service levels and characteristics of serviced communities.
- Provide actionable recommendations for improving equity and efficiency in the MBTA bus system.
- Analyze and identify patterns of public transportation performance of the city of Boston, and find bottlenecks that may hinder the performance of Boston bus services demographically (disparities, inefficiencies).
- Invest in the bus system involves more than just acquiring vehicles or improving infrastructure.

### **Why is this project important?**

- Promote equity and accessibility in public transportation.
- Impact economic development and environmental sustainability.
- Enable data-driven decision-making for route optimization.
- Provide reliable transportation for everyone without discriminating against their backgrounds

### **What type of data will you collect or be analyzing?**

- MBTA bus data: routes, schedules, predictions, stops, vehicle positions, ridership.
  - Bus routes, bus trips, waiting times, capacity vs. demand, and census data for different demographics at different bus stops.
- Demographic data: Boston Census data (income, race, ethnicity, age)

### **What are potential limitations of the project?**

- Data quality and completeness.
- Limited data sources available:
  - There may be missing/disconnection among different datasets that would prevent the team from connecting various insights to get a big picture.
  - Last data was from 2020
- Biased data, the data may be more focused on one region of the city or lean toward a certain amount of timestamp where buses are being deployed the most.

**What are your next steps? Divide tasks amongst the team**

- Data Collection + Preliminary Analysis
  1. Connect with PM and clients
  2. Think of questions for the first meetings
  3. Finish setting up Trello, Slack, Git Repository, etc.
  4. Exploring the dataset and API