Working Title: Paratransit Fleet Scheduler

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Scrum Master: Tyler Rambot

Team Leader: Ant Macchia

Github: https://github.com/amacchia/ParatransitFleetScheduler

Slack: senproject-spring19.slack.com

Project summary:
We will design a paratransit ridesharing service to augment existing public transit resources. Patron requests will be serviced through a variable fleet of vehicles. Patrons will be able to request a ride for a specific address and time via our website, and drivers will receive generated schedules at the beginning of their shift through our website interface. These routes will be optimized for efficient travel time, while maximizing patrons served.

Project goals:
Reduce carbon emissions and transportation costs.
Increase mobility and independence for underserved populations.
Implement a static algorithm that will create a pickup and drop off route for users.

Project features:
An easy to use website interface for users to input requests
A website to display generated routes to drivers
A database for storing and processing requests
A scalable backend application for efficiently generating routes over large numbers of patrons and fleet drivers

Limitations:
The predetermined nature of the ride requests might disenfranchise users who have urgent transportation needs.
Traffic, construction, and unforeseen circumstances may cause delays for patrons.
We may not have sufficient infrastructure to support an inordinate volume of patrons.
We cannot guarantee timely rides.

Stretch Goals:
Include the ability to handle on-the-fly dynamic requests, in addition to planned ones, using an efficient insertion algorithm
Expand our booking system by allowing patrons to call in to our operators, who will schedule the request
Live tracking of drivers for waiting patrons
iOS/Android app