iShuttleTracker

Project Proposal for Summer 2019
github.com/quuu/iShuttleTracker

Description

iShuttleTracker is an iOS port of the RPI Shuttle Tracker web app. It aims to add functionality past what the web app is able to offer, such as smooth shuttle movement and precise ETAs, notifications for nearby shuttles and scheduled trips, dynamic schedule display, a settings panel to toggle views, and more. The project is 100% in Swift.

Goals

- Notifications
    - Add an interface through which the user can schedule trips to be notified for
    - Switch nearby notifications to check how many minutes it will take a shuttle to reach the user instead of how many meters a shuttle is from the user
    - Look into keeping track of nearby shuttles and notifying the user even when the app is in the background
- Shuttle Prediction
    - Rework the shuttle prediction algorithm to make it more reliable, possibly using machine learning
    - Use the shuttle prediction algorithm to make ETA predictions for shuttles and display these on stops
    - Constantly update position of shuttle markers on the map based on predictions
- Schedule
    - Finish the dynamic schedule display, possibly with heatmap
- Settings Panel
    - Make the switches and buttons in the settings panel functional
    - Display scheduled trips in the main settings panel and add a new panel to schedule trips through
- Tests
    - Add unit tests to verify that the frontend and backend are working as intended
- Refactoring
    - Refactor the entire project to use the MVC pattern
- Deployment
    - Get iShuttleTracker on the App Store

Team Members

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