

Matt Schroer
Kyle Vinagro

Project Proposal

FindRack

Bike riders of Boston are an oft-abused, neglected people. Forced to ride on cramped, narrow, winding streets, they often arrive at their destination frazzled and running late. Much to their chagrin, the bike racks they need to secure their bikes are often full by the time they arrive, forcing a desperate search for an alternative spot. This hunt for a bike rack takes precious time, and often results in the cyclist being late for work or class. For users of Boston's Hubway system, there a multitude of apps showing the locations of nearby Hubway stations and the empty spots at each. But for the common man, owner of their own bike, there is nothing.

The target users of our application are the bike owners of Boston. Our target users depend on bike transportation, and tend to have an established daily pattern of traffic. They most likely already have favorite bike racks, but would like a better way of tracking their availability. Other users are perhaps new to the area, and need to discover the bike racks that are most convenient to their life.

We are proposing an application that would solve this problem for these cyclists. Our application, which would target mobile users, but may be mocked up as a desktop app, would automatically show a user the bike racks within a certain radius of their location. It would also allow the option to manually change the location to look in a different area. For this to work realistically, we would need to install bike racks that have sensors that actually tell us how many spots are open. Since that is outside the scope of this project, we will have a "service area" in which we place a number of fictional bike racks that have "sensors" that we can manipulate. We would most likely use the Google Maps API for the location information, but other map APIs are also an option.

The main interface would show a list of all racks near the user's location labeled using nearby buildings, landmarks or street names. Beneath each station, it would show the total number of spots as well as the current available spots. There would also be an icon that is green for mostly open, yellow for almost full and red for full. There will also be an estimated distance from the user's location in miles as well as a button to favorite a particular station. When the user click on any one of the racks, it will bring up a map view that will show the exact location of the rack relative to the user's location. If the user swipes to one side they are presented with

photographs of the bike rack and its surroundings to help them identify it more easily. The application would also allow the user to select one or more “favorite” racks near their home, school or work that will show up when they click the favorites button and are taken to a separate favorites screen that behaves in much the same way as the main screen. There will also be an options screen that will allow you to change various features.