

## **Pleasant Pedal**

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### **Value Proposition**

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Pleasant Pedal is a web application designed for Seattle-based cyclists, from beginner to expert, who are unhappy with the crowds on popular trails and find the optimal times to ride when trails are free from other riders and pedestrians. Our interactive platform is designed with the following goals in mind:

1. Enhanced planning capabilities for cyclists,
2. Improved safety on shared roads, and
3. Promoting healthy exercise and environmentally friendly transport.

For new cyclists who want to avoid the judgment of advanced cyclists or for avid cyclists who want free range of the trail, our web application will make it easier to enjoy the open safe trails, so you can focus on peddling pleasantly.

The primary objectives as stated in our Value Proposition was achieved in the following ways:

1. Enhanced Planning Capabilities: Our application provides users with information on the trails available in the City of Seattle and enables the users to leverage traffic data to plan their ideal ride.
2. Improved Safety on Shared Roads: Having studied the crime data from the Trail Neighborhoods, our platform gives the user realistic safety expectations to be had of these trails.
3. Promoting Healthy Exercise and Environmentally Friendly Transport: Cyclists have their own personal incentives for biking. We believe that our users, no matter their motivations, are all investing in healthy exercising and sustainable transport to some extent.

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### **Data Analysis and Community Insight**

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Working with our database gave us important insight into the local biking community and our target demographic for the application.

1. The Myrtle Edwards to Elliot Bay Park (ranked as a Beginner trail) is one of the more popular trails for pedestrians, possibly due to its waterfront location, views of the mountain-ranges, and the nearby tourist attractions. On the other hand, the I-90 Trail (ranked as an Advanced trail) is less popular amongst pedestrians, potentially due to heavy bike and car traffic.
2. Crime and Biking trends can be seasonal. Our data shows that the peak biking seasons fall somewhere between April-August, possibly due to the warmer weather and better

biking conditions. There is some overlap between the peak months for crime, which is some time between July-December. Crime rates can also be attributed to the intense fluctuations in weather that tends to occur during Fall-Winter seasons.

3. Rainier Beach, Leschi, Sand Point, Capitol Hill, Ballard, and Fremont provide the most transit and ground passenger transportation services for commuters. Bike infrastructure tends to be more common and better maintained (by the city) in commuter-heavy neighborhoods.
4. Biking activity tends to increase during higher temperatures even if you include different types of weathers such as rain
5. Biking activity increases during Sunny weather, though Rain does not seem to be a major deterrent for Seattle Bikers. This could be influenced by Seattle's general weather conditions, which is often rainy. Local bikers might have a higher tolerance for this type of weather.

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### **Reflection**

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Our group performed well together because we were all motivated by a shared vision for the final application. Through consistent communication and collaboration, we were able to understand the project goal and our roles within it. The concept idea itself was a strong venture that we were all interested in.

Data Collection proved to be a major challenge in this project. The City of Seattle has approximately 11 Bike and Pedestrian counter programs located in 11 different neighborhoods. This does not give us a truly accurate representation of the available bike trails in Seattle. Pedestrian Counter data might not be very reliable, and seems to be an under-representation of total pedestrian traffic. Counters are located at specific coordinate points on a trail and do not give a full-representation of the entire trail traffic. Some of the counter programs are newer than others and might not have as much total data as other counters. For certain operations, we had to minimize the date windows for comparisons. Furthermore, without any users, we had to generate our own mock user dataset. Though this was useful for testing operations, it wasn't an actual representation of user motivations and application engagement.

The next step for our application is to look into possible commercial opportunities. How can we market this application to meet the demands of our target demographic, and what tools or resources would this require? To truly study this market, field research and focus testing is a must. Engaging in dialogue with real people will allow us to add and build on our User-oriented features. Moving forward, we would want to take advantage of social networks to expand our user database. Within our application, we could build community oriented features like a message board, the option to create a biking group, the option to host meet-up events, and the option to set individual or group fitness goals.

## Updated UML Diagram

