Rydr

Software Project Proposal

By

Candice Academia

Johnny Chi

Nicholas Ruiz

Robert Steiminger

Stephen Sing

San Jose State University

Spring 2017

Dr. Ramin Moazeni

23 February 2017

**Description of the Product** (what users will see and how they will use our project)

The product will be an android application for biking/walking trails.

**Need for the Product** (purpose of this project; why should it even exist)

The purpose of this project is to create a product that will enhance the experience of biking, hiking, running, or any physical activity through public trails. Our product will make navigating and accessing trails easier while providing the ability for users to share their experience through social media, collecting achievements that they can display for their friends, or by connecting with fellow trail runners and biking enthusiasts. Because of the intricate nature of trail roads as opposed to regular street roads, the current market of navigational applications are not capable of accurately tracking and representing these trails. Our application aims to remedy this by developing specifically for the outdoor audience in mind. By personally understanding and navigating public trails we will be able to create an application unlike anything in the marketplace before it.

**Potential Audience** (our users)

We are targeting the outdoor audience who already have an interest in hiking and biking. While our main focus will be that audience, It’s also important that we try to attract new users that have a growing interest in the outdoors and make it easy for them to use as well. To attract the general population, we will make sure to implement social media functionality and reiterate the ability to share their experiences with friends and family to continually grow the interest of our product to potential audiences. The integration of an achievement system will also foster a friendly competitive atmosphere that will keep users hooked on the application. In terms of demographic, the younger generation will be the main focus as they will be the main users of the app.

**Discussion of Competing Products** (persuade the reader why our product will be better)

As mentioned, our product will focus on the biking/walking trails which are smaller roads which current road map assistance applications still have trouble navigating through 100% mistake proof – especially when there are overlapping bridges or the streets are very close to each other and too narrow.

**High-level Technical Design**

(technical part that includes (1) programming language(s)/libraries/framework/other technology used, (2) technical architecture, (3) description of how we will build this )

Since majority of the team members are new to application development, we will use Android Studio as we are going through it over this course which will make it easier for the project completion. Within Android Studio, Java and XML are utilized. We will be building our product from the ground up and will do so with a user-friendly interface that would not be too complicated to understand by anyone.

**Resource Requirements** (what we need to build our project and mention any obstacles if any)

Time and extra effort for team members are needed since we are building it from scratch. Assuming that no one has the expertise in using Android Studio per se, it will require effort in researching which ones would be the most optimal way to develop our application. Knowing that each team member has their own other projects and classes to attend to, synchronizing schedules (i.e. division of work and work dependencies) will be an obstacle.

Since current road map applications are still having trouble distinguishing the smaller roads, we might not be able to successfully implement what we want to accomplish. We might need to really look into other software or libraries that we have no idea how to utilize to be able to accomplish what we want our product to be.

**Potential Approaches** (mention alternative solutions to the problem area that our product addresses and reason why we decided to do the approach we did)

Divide the team into starting building the framework of our product and the research team to determine if what we want to achieve is even feasible in the given time frame of this course. After that, reevaluate our approach and see what we could do as an alternative product with the same concept in mind.

**Assessment of Risks** (potential risks and ways in reducing the said risks)

The risk of not being able to implement our product the way we want to would be really big and if it turns out that we are unable to, then we would have just wasted our time. There is also an inherent risk that we will hit the roadblocks that current navigational applications have also hit that have made them not able to accurately track trails. To reduce this risk, we need to do the above mentioned approach. Also, we should have a backup product plan.

**Next Steps** (what to do next to build the product, additional features that could be added later on)

Meet up and decide on the roles each team member wants to be in charge of as well as deciding on the overall flow of our application development. Begin to research additional software or libraries that can help us develop the mapping framework and provide cursory data that we can expand on in the development cycle.