**Grand Valley Bandwagon**

**A Carpool App**

**Prospectus**

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**Project Description**

Every semester, the Rapid bus stops at GVSU’s campuses overflow with students waiting to board. After long waiting periods, many step onto the bus only to realize they are one of the unlucky ones who must stand, cramped at over capacity for the next 20 minutes. At the same time, there are hundreds of students driving themselves and four empty seats from Allendale to downtown.

We’d like to develop and launch an iOS app that facilitates carpooling between GVSU’s campuses and incentivizes drivers through payment of a small fee by passengers. We’d like to make it simple for students to travel between classes and get groceries without the hassle of the bus during busy times and outside of service hours.

**Technical Strengths**

Nick has experience in iOS and Android app development. He is proficient in solving data structure related problems and identifying improvement areas. He has used the Google Maps API in the past which is directly applicable to this project. With his prior degree in communications he is confident in his ability translate user feedback into application features and refinement.

Michael has some experience with iOS development and Xcode.  He is proficient in database and has some experience with Firebase which is our expected backend.  He is good at working in groups and problem solving with code.

Ryan is familiar with Xcode and it's UI design builder and has a basic understanding of Swift's protocols and delegates. In addition to those skills, he has great researching skills and will put his familiarity with the Swift programming language to use for this project.

**Growth Areas**

As a team, we are looking forward to implementing concepts of inheritance and utilizing data structures on a large-scale project. Specifically, Nick is looking to improve in the areas of testing, user experience development, and API integration. Michael is looking to further his knowledge of iOS development and various API integration. Ryan is curious as to some of the different ways we can provide safe and automated methods of making sure that both drivers and riders alike are members of the GVSU community. He is also interested in learning how to implement the safe sharing of location information in order to facilitate real time location tracking of drivers on a map.

**SECEPP Relevant Principles**

**1.1** Contribute to society and human well-being.

**1.3** Be honest and trustworthy.

**2.2** Acquire and maintain professional competence.

**3.01.** Strive for high quality, acceptable cost and a reasonable schedule, ensuring significant tradeoffs are clear to and accepted by the employer and the client, and are available for consideration by the user and the public.

**3.10.** Ensure adequate testing, debugging, and review of software and related documents on which they work.

**7.08.** In situations outside of their own areas of competence, call upon the opinions of other professionals who have competence in that area.

**8.01.** Further their knowledge of developments in the analysis, specification, design, development, maintenance and testing of software and related documents, together with the management of the development process.

**8.02.** Improve their ability to create safe, reliable, and useful quality software at reasonable cost and within a reasonable time.

**Product Backlog**

1. Sprint 1
   1. Publish Prospectus
   2. Finalize Feasibility Report
   3. Research
      1. User profile management/data storage
      2. Messaging b/w users (built-in or share phone number)
      3. Payment management (Paypal, Venmo, etc)
      4. Restrict users to gvsu.edu accounts
   4. Create Wire Diagram (w/ all navigation flows)
   5. Develop View Controller Skeletons
   6. Integrate Functioning App Navigation
   7. Integrate User Profile Management and Data Storage API
   8. Create a “How it Works” Section of the App
2. Sprint 2
   1. Advanced Features Research
      1. Google Maps API integration
      2. Google Maps real time pin locations
      3. Google Maps custom pins
   2. Integrate Google Maps into App
   3. Integrate Payment System
   4. Integrate Messaging (if necessary)
   5. Polish Design for All Views
3. Sprint 3
   1. Revisions
   2. Launch to App Store
   3. Market/Solicit User Feedback
   4. Revisions Based on User Feedback