**Jake Rauchen, Kevin Tayah, Matthew Horger**

**Project Script**

**Title Slide: (Kevin) - Hello, our project is called Elevate. In short, it is a custom built safety helmet for recreational riders with a supported mobile application that supplements the riding experience**

**Meet the team: (Matt) Hi, I’m Matthew Horger (Kevin) I’m Kevin Tayah (Jake) and I’m Jake Rauchen. We are group 46.**

**Situation (Jake): Our idea for the project came from our different background influences. One was rider safety. In the city, many riders experience falls and hazards to their riding experience, such as cars in the shoulders or barricades blocking riding areas. With safety in mind, we wanted to develop a project that not only helps riders but keeps them from injuries. (click) Another situation was recreational enjoyment for skaters. Many skateboarders and longboarders look for the biggest hill to skate down. In our supported application, we hope to supply them with the information of the biggest hill while also promoting their safety with the helmet. (click) Finally, we want riders to have analytics for their ride. Some professional athletes like to manage their workout based off of conditions such as target heart rate, incline, mileage, and more. With Elevate, we hope to provide this information.**

**Project Scope (Kevin): Every project has something that they want to deliver. (click) For Elevate, it is essential that we provide a modular helmet with the mobile application that supplements the ride. This mobile helmet will provide blind spot tracking as well as alerts for objects in blind spots. The mobile application must have basic statistical information such as tracking, elevation, and mileage. (click) If time permits, we would like for the mobile application to be more customizable for the users so that it provides more personalized data, such as health info and more. (click) Outside of the scope of this project, we would love to establish a corporate connection, potentially with Indiego, to test our project and record user feedback.**

**Project Activities: (Matt) Here is our projected Gantt chart for Elevate. We currently have four phases to our timeline; Establishment, Requirements, Design, and Test. For requirements, we have to learn how to wire hardware and manipulate the programming languages before designing our project. We also have to obtain hardware and create all necessary developer accounts before proceeding. For the design phase, it’s as simple as wiring all hardware components, coding the Arduino microprocessor with our tracking code, and developing the mobile application and implementing data within the application. Then, the testing phase and evaluation of our project will extend into CI 103.**

**Technological Aspects: (Matt) Our project has many pieces of technology involved. (click) Our main piece is the Arduino Micro Microprocessor (show processor). This will be the heart of the helmet; it will allow for the modules to interact with the mobile application and engage with the user. (click). Our next piece is Ultrasonic range modules and GPS modules that will provide blind spot and coordinate tracking. (click) Android studio will serve as the backbone for our mobile application development, (click) while Google Maps API will provide the backbone for our database structure. (click) Multiple languages will be used for this project, such as (click) JSON for manipulating the Maps API, (click), C++ for the mobile application, (click) and Java for the Arduino microprocessor.**

**Challenges: (Jake) (click) One of the biggest challenges in this project is being familiar with the programming languages. With all that is required in Elevate, knowing what pieces of code will work for project is crucial to success. (click) Also, time management in terms of mobile application development will hinder the timeline for our project. If we can accomplish becoming familiar with the code, mobile application development should not take too long. However, we project it to be the longest part of the project. (click) Finally, baselines for how well our product works is going to be a challenge. Obviously, we want the project to be ideally what we want it to be, but variables such as sensor response time and application usability might come into question when designing our project.**

**Questions: (Kevin) At this point, we would like to see if anybody has any questions. If not, we would like to thank you for your time and consideration.**