

Project Scope - 312

- Project description:
 - Wearable sexual assault device to protect the victim when unconscious.
 - Should communicate with companion app to alert desired emergency contacts.
 - Protect and prevent user from being sexually assaulted.
- Key goals:
 - Create a magnetic device to send a signal to phone when disconnected from each other.
 - With this signal the user can send location to multiple people and record to build a case.
 - Should both actively prevent sexual assault and be used to build a case for the victim against assaulter.
- Markets:
 - Primary markets can include 1 in 6 females and 1 in 33 males who are statistically at risk of rape.
 - Child victims that are 12-17-years old could also be a part of this market.
 - College students are at a higher level of risk of sexual assault than the normal public.
 - Although the nature of the device is geared towards sexual assault, the discrete aspect of the design can also apply to preventing human trafficking or police brutality.
- Assumptions:
 - We need to assume that the user's phone will be within range to access and send data to contacts.
 - Due to the disparity in genders with respect to sexual assault, we can assume that the majority of users will be women.
 - Additional note: the team would like to give the device intrinsic functionality (i.e., an alarm or microphone) that works independently of the user's phone.
- Stakeholders:
 - Power Angel LLC
 - Advisor, Dr. Babak Noroozi
 - Instructor, Dr. Oscar Chuy
 - Reviewer, Dr. Ming Yu
 - Potential sexual assault victims, particularly women on college campuses

Department of Electrical and Computer Engineering

Code of Conduct

Team #312 - Anti-Sexual Assault Wearable Device

Names:

Andrew McGlone

Charles Johansen

Kathleen Kelly

Kevin Martinez

Scottie Jacobs

Date: 18 January 2022

Mission Statement

Team 312 is committed to creating a product that accomplishes all of the project's key goals. In completing this task, all group members will contribute and demonstrate respect to each other. The project will serve as both a learning experience for the team members and as the creation of a product to benefit stakeholders and potential markets.

Roles

Each team member is delegated a specific role based on their experience and skill sets and is responsible for all here-within:

Team Leader-Kathleen Kelly

Responsible for managing the team and organizing meetings with the team, with the sponsor, and with the advisor.

Head CPE- Kevin Martinez

Responsible for overseeing the programming aspect of the project. This includes both development of the companion app and the programming of the device's microcontroller.

Head Developer - Scottie Jacobs

Lead the development of the companion application for the device. This includes working closely with the Head of Integration, ensuring that the device and the app work seamlessly.

Head Integration- Andrew McGlone

Specializes in programming the microcontroller that will be the bridge between the physical device and companion app. Communicates and assists with both the physical design and the app development team.

Head EE- Charles Johansen

Designs and realizes the physical device as well as implements the circuit and ensures all voltages and currents are where they should be. Ensures necessary power is given to all inputs and outputs of the device.

“Other Duties”

- Kevin Martinez will use his knowledge of 3-D printing to create plastic pieces for the design
- Andrew McGlone will keep a record of minutes for team meetings.
- Kathleen's experience in electrical engineer will also be applied to the construction of the device.
- As subsections of the project develop and require attention, the team will hold meetings with all of the members to discuss and decide how to delegate the necessary responsibilities.

All Team Members:

- Work on delegated tasks of the project
- Strive towards the project's goals and success

- Deliver on commitments
- Recognize and demonstrate the importance of teamwork
- Contribute suggestions and constructive criticism
- Effectively communicate their progress, ideas, and availability
- Be open-minded to others' ideas
- Respect others' roles

Communication

The main form of communication will be over text-messaging amongst the team, as well as through regular meetings of the whole team. Email will be a secondary form of communication used for contacting the advisor and sharing important documents, such as deliverables and meeting minutes.

Each group member must regularly check their school-issued e-mail, and reminders of important e-mail communications will be relayed through text messages. If no response from team members is received within 24 hours, their behavior will be reflected in the peer review.

As a courtesy to fellow team members, if a team member cannot attend a meeting, they must inform the rest of the team at the earliest time possible.

Team Dynamics

The team members are all equal and their ideas will be treated as so. All suggestions and constructive criticisms are welcome. It is each team member's responsibility to not only show their fellow students respect, but to ensure that every team member shows every other team member the same level of respect. Team members will not be discriminated against for their race, gender, ethnicity, sexual orientation, or any other personal characteristic. If any team member feels disrespected, they should vocalize their concerns with the other team members to resolve the issue.

Ethics

Team members should be familiar with the IEEE Code of Ethics and adhere to it. If a team member makes a decision that another student considers unethical, the student should voice their concerns to the entire team to resolve the issue, at which point, the IEEE Code of Ethics should be referred to.

Dress Code

Team meetings and sponsor meetings will be held in casual attire suitable for a classroom. Presentations will be given in business casual attire and the degree of formality for business casual will be determined on a presentation-to-presentation basis.

Weekly and biweekly Tasks

Team members will participate in all meetings with the sponsor, advisor, and instructor. During these meetings, ideas, project progress, budget, conflicts, timelines and due dates will be discussed. In addition, tasks will be delegated to team members during these meetings. Repeat absences will not be tolerated. While there is no specific number of acceptable absences, if a team member believes another student's absence has become problematic, that team member should bring their concerns to the rest of the group. If the team cannot manage to compel the student to attend meetings, the instructor will be notified. If a team member is unable to meet in person, Zoom meetings are acceptable.

Decision Making

It is conducted by consensus and the majority of the team members. Should ethical/moral reasons be cited for dissenting reason, then the ethics/morals shall be evaluated as a group and the majority will decide on the plan of action. Individuals with conflicts of interest should not participate in decision-making processes and should announce said conflict. If the conflict is personal, the announcement may lack details. It is up to each individual to act ethically and for the interests of the group and the goals of the project. Achieving the goal of the project will be the top priority for each group member. Below are the steps to be followed for each decision-making process:

- Problem Definition – Define the problem and understand it. Discuss among the group.
- Tentative Solutions – Brainstorms possible solutions. Discuss among groups is most plausible.
- Data/History Gathering and Analyses – Gather necessary data required for implementing Tentative Solution. Re-evaluate Tentative Solution for plausibility and effectiveness.
- Design – Design the Tentative Solution product and construct it. Re-evaluate for plausibility and effectiveness.
- Test and Simulation/Observation – Test design for Tentative Solution and gather data. Re-evaluate for plausibility and effectiveness.
- Final Evaluation – Evaluate the testing phase and determine its level of success. Decide if design can be improved and if time/budget allows for it.

Conflict Resolution

In the event of major conflict amongst team members the following steps shall be respectfully employed:

- Communication of points of interest from the dissenting parties to the entire team.
- Administration of a vote, if needed, favoring majority rule.
- Team Leader intervention.
- Instructor will facilitate the resolution of conflicts.

Statement of Understanding

By signing this document, the members of Team 312 agree to all of the above and will abide by the code of conduct set forth by the group.

Name

Signature

Date

Andrew McGlone

Andrew McGlone

1/18/22

<u>Kathleen Kelly</u>	<u>Kathleen Kelly</u>	<u>1/18/22</u>
<u>Charles Johansen</u>	<u>Charles Johansen</u>	<u>1/18/22</u>
<u>Kevin Martinez</u>	<u>Kevin Martinez</u>	<u>1/18/22</u>
<u>Scottie Jacobs</u>	<u>Scottie Jacobs</u>	<u>1/18/22</u>