312: Wearable Anti-Sexual Assault Device


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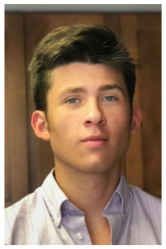
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For the assigned senior design project, it has been requested to update the progress of the team. At this time, this abstract will serve as a summary of our overall progress and goals for the creation of the Wearable Anti-Sexual Assault Device. Currently, the schematic has been created and is ready for PCB transfer to then be ordered as a final prototype. For app development, the dashboard, and other small features, such as geolocation and cloud sharing are being researched and perfected. Our Bluetooth module using Flutter has been a success and we can now send and receive signals from the ItsyBitsy microprocessor to both android and IOS devices.

As stated, before we plan to produce the PCB footprint to send off for prototyping in early February. Currently planned is further app development of the Community features for victim support, safety network for emergency contacts and overall integration as well as dashboard design. The team hopes to continue with the idea of 3D printing a box for our magnet and our prototype module – this will be the prototype being sent for assembly. NinjaFlex is a soft material that is planned to use for a more comfortable style for the wearer. As one member of the team works on 3D printing, we will also have one other person assigned to work on the battery as well as the wire waistband.

This wearable device is design to build evidence and support the user should they become a victim of sexual assault, however the overall goal is to prevent sexual assault. This is accomplished through the Magnet-Sheet Metal and Wired Waistband Trigger System. Once the item is tampered through these methods, a speaker will notify the attacker, a microphone will record and back up to SD card. The companion app will store this data and notify emergency contacts with the user's location.