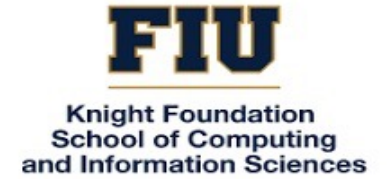


Fall 2021 Capstone I Project

Water Wand IoT Application

Team Lead: Alexander Jimenez
Capstone I Student: Tomas Alvarez Lopez, Bernardo.D Cruz,
Brian Mora, Eddy Garcia, Alejandro Ruiz , Musa Jean,
Zackary Wright.
Product Owner: Biayna Bogosian
Instructor/Faculty: Dr. Masoud Sadjadi



Problem:

Miami-Dade's flooding has caused different issues to businesses and many communities, causing road safety disruption, and also increasing traffic accidents that could end in fatalities. These issues can cost the city and the community an expense we are not ready to live. To ease the problem, Miami's flooding can cause us, we have an application that will work with the Water Wand IoT's existing invention. The mission is to provide a user-friendly data application that will be easy to use, easy to install and display real-time data. It will provide our users with the conjunction of other neighborhoods and larger communities; this will help our local environment understand climate change and predict future events to come to the area

Objectives:

- The application must have a user-friendly interface.
- The application must be easy to install.
- The application must be able to display pollution data
- The application must send real-time data through Wi-Fi.
- The application must organize data to be displayed in different visualizations formats
- and date features, including charts, graphs, and others.
- The application must allow for data to be saved to a google map database
- The application must be able to send data to cloud storage

Constraints:

- The application must be compatible with Particle Electron Micro Controller.
- The application must be compatible with size resolution/screen for cellular devices.
- The application must be Bluetooth compatible
- The application must be useful for Android phone systems

Project Description:

The Water Wand IoT Application consists of a Bluetooth iOS application with the functionality of monitoring flooding data by collecting data that is recorded by users through the Water Wand IoT and saved in a cloud storage device. The device will collect this data with the permission of the user and will potentially aid in the prediction of dangerous flooding areas by monitoring trends. This application will not only display map data but also year to date data when comparing data sets. The utilization of this Water Wand IoT Application will extend to anyone and will work toward eliminating the uncertainty of flood zones and aid in reaching a solution to preventing heavy flooding in South Florida.

Technology:

- Android Studio
- Java

