iOS Application for PV Panel Wireless Energy Monitoring System
ECE 4040 - Senior Design (Capstone) Project

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Objective:

The aim of this project was to fetch and display instantaneous power and harvested energy data from solar panels in the capstone project.

Background:

The iOS application below was designed for the capstone project that I worked on for my electrical engineering degree.The iOS application basically sent the selected date,using the date-picker in the app, to the back-end of the application that was on a cloud server then the back-end of the application fetched the requested data from the data server that held harvested data from solar panels.The fetched data was sent back to the iOS application and displayed graphically and numerically.

The back-end of the iOS application was written in Node.js and MongodB was used as database to held project data.The back-end basically had the schema for the MongodB database, the source code for GET requests,dB connection,as well as the configuration for the cloud server startup.

The front-end of the iOS application was written in Swift and made using Xcode 9.The library used for plotting data was written by Daniel Gindi which can be found at github.com/danielgindi

Screenshots of the iOS application can be found in the next page.

Screenshots:

Main Page

About Page

Monthly View

Daily View

Weekly View