

NAME

(123) 456 7890 ◊ Somewhere, Alabama ◊ something@gmail.com

[LinkedIn link](#)

Describing myself here

EDUCATION

Somewhere University
B.S. in Electrical Engineering

August 2015 - May 2019
Overall GPA: 3.64

SKILLS

Proficient	C, C++, Matlab, Opengl, Verilog
Strong Knowledge	Python, OpenCV, Simulink, Quartus, Wireshark
Familiar	Visual Basic
Protocols	I2C, SPI, CAN, UART, RS232, USB, TCP/IP, UDP
Hands On	Software Development life cycle, Oscilloscope, Signal generator Logic Analyzer, Reading Datasheet/Documentation

TOOLS

Familiar Environment	Energia, Visual Studio, Linux, IAR, KeilUvision, Eclipse, Quartus Codeblocks, Git, Latex, Bash
Development boards	Arduino, MSP-430, TM4C123, Beaglebone, ESP-32, Raspberry-pi Terasic DE2-115

RESEARCH

[Research link](#)

BLE-mesh Network

- Helped develop BLE-mesh network
- Configured raspberry-pi as a mesh-provisioner
- Configured ESP-32 which ran Zephyr OS as mesh-node to be implemented in the mesh network

Solar panel Power tracking

- Implemented the maximum power point tracking algorithm, specifically Perturb and Urban method to track the maximum power a solar panel can get.
- Used Arduino-Uno to implement the algorithm
- Implemented LCD module in arduino to display the maximum power of solar panel

PROJECTS

[project link](#)

Pirate Robot

Python, C, Raspbery pi, Embedded Linux

- Made an autonomous navigating Robot for IEE-SECON 2018.
- Implemented the IR sensor in C and motor controls, servo control, Ultrasound sensing in python
- This project along with the Neural Network based navigation could be used to advance this project further.

Neural Network based robot navigation

Matlab

- Implemented gradient based learning on robot to navigate in an unstructured environment
- The algorithm specifically Integrated Neural Networks into a Reinforcement Learning

File System on Solid-State

C, TM4C123, BOOSTXL-EDUMKII

- Implemented a Read-Once FAT file system on a Solid-State
- Partitioned the disk into 256 sectors of 512 bytes each on which data could be stored
- One sector was reserved for the operating system to manage the directory and allocation scheme and the other 255 sectors contained data

Object Recognition software

Matlab

- A program that recognizes an object from the referenced input image.
- Implemented Harris-Corner detection algorithm to extract features from an image
- Implemented forward and backward matching to correctly identify the object from the referenced image

Fitness device

C, TM4C123, BOOSTXL-EDUMKII

- Implemented Round-Robin preemptive scheduler that tracked 7 different threads with different priority
- RTOS also implemented sleeping and blocking semaphore for various threads
- The OS measured steps using the accelerometer, audio sound amplitude using the microphone, temperature using the TMP006, and light using the OPT3001 from BOOSTXL-EDUMKII and displayed it onto the LCD module.

Alarm Clock

C, MSP430

- An alarm clock with different functionalities such as timer, stop-watch.
- UART was implemented to connect Hyper-terminal to the board.
- Watchdog timer and other internal timers was implemented with interrupt to accurately track the timing functionalities