HARRIS MOHAMED

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EDUCATION

University of Illinois at Urbana Champaign May 2021
Seeking a Bachelors of Science in Computer Engineering

COURSEWORK

ECE 385 – Digital Systems Lab (FPGA design)
ECE 220 – Computer Systems Programming
CS 498 – Internet of Things
CS 225 – Data structures
ECE 210 – Analog Signal Processing
ECE 310 – Digital Signal Processing

EXPERIENCE

System Design/Architecture Engineering Intern May 2019 – August 2019
Kratos | RT Logic Colorado Springs CO
- Wrote a testing suite and developed customer code for a real-time UI with Angular
- Assisted in the implementation of a narrow bandwidth, high-speed FPGA-based digitizer
- Implemented a high-throughput data communication network
- Learned theory and implementation of passive ranging as related to satellite orbit determination

Embedded Software Intern May 2018 – August 2018
Continental Automotive Barrington IL
- Developed and debugged C code for the S32144k ARM microcontroller
- Debugged a watchdog on a the S32144k microcontroller
- Implemented functions on a CAN-FD network using the Vector suite of software, including CANape and CANalyzer

Product Systems Intern May 2015 – January 2018
Weber Packaging Solutions Arlington Heights IL
- Developed GUIs in C# to automate and expedite several tasks

PROJECTS

HackMe February 2019 – Ongoing
HackIllinois 2019 Competition – University of Illinois Urbana-Champaign IL
- Developed embedded circuitry to extract electrical impulses, wrote machine learning algorithms to analyze the waves, implemented Azure databases to collect the data, and developed a website in Angular JS to view the data in real time
- https://devpost.com/software/hackme
- Winners of Caterpillar and Particle design awards at HackIllinois 2019

Data Acquisition and Quantitative Analysis Leader Fall 2017 - Ongoing
Illini Formula Electric Urbana-Champaign IL
- Implementing a network of ARM boards to log data from several crucial sensors for the car
- Development of code to analyze car data and create helpful visualizations, as well as characterize primary battery pack

Dyslexia Project January 2018 - Ongoing
ECE Pulse Competition– University of Illinois Urbana-Champaign IL
- Utilizing a Tobii eye tracker using C# to assist those with dyslexia
- Creates a histogram that compiles data of troublesome words with how frequently they appear
- Pulse Ideathon 2018 competition runner up

Quadcopter Drone August 2016 – Ongoing
Personal
- Designed a PID flight controller for quadcopter designed from scratch controlled by a microcontroller (Atmega238p)
- Contained a speaker, various sensors, remote viewing via Google Cardboard, camera, and AI (IBM Watson)
- Collaborated with a partner to write flight code, app code, construct product, and demoed final product at Navistar

SKILLS

C • C++ • C# • Visual Studio • Eagle • Inventor • SystemVerilog • Java • XML • Javascript • Python• Github • HTML• CSS • Javascript • Linux • Altium • R • RStudio • MongoDB • Django • Bootstrap • pSQL• AWS