

HARRIS MOHAMED

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EDUCATION

University of Illinois at Urbana Champaign

May 2021

Seeking a Bachelors of Science in Computer Engineering

COURSEWORK

CS 225 – Data structures

ECE 385 – Digital Systems Lab (FPGA design)

ECE 220 – Computer Systems Programming

MATH 286 – Differential Equations + Linear Algebra

CS 498 – Internet of Things

ECE 210 – Analog Signal Processing

EXPERIENCE

Embedded Software Intern

May 2018 – August 2018

Continental Automotive

Barrington IL

- Developed and debugged C code for the S32144k ARM microcontroller
- Used an oscilloscope and multimeter to debug a watchdog on a the S32144k microcontroller
- Implemented functions on a CAN-FD network using the Vector suite of software, including CANape and CANalyzer
- Developed templates for Unit level testing to test C functions, primarily focusing on branch coverage.
- Planned and led several meetings which dealt primarily with software and customer requirements

Product Systems Intern

May 2015 – January 2018

Weber Packaging Solutions

Arlington Heights IL

- Worked with mechanical engineers to validate CAD sketches and construct label applicators
- Developed GUIs in C# to automate and expedite several tasks

PROJECTS

HackMe

February 2019 – Ongoing

HackIllinois 2019 Competition – Engineering Design and Development

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
- Design and implementation of a distributed database system to effectively and reliable sync and upload data
- 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 to compile a list of keystone words to learn
- 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