

Nuhash Syed

Allen, TX

-Email me on Indeed: <http://www.indeed.com/r/Nuhash-Syed/61d8cc52cc81659f>

Volunteer work, Language learning, Travel

Authorized to work in the US for any employer

Work Experience

Smart Electric Skateboard Team Leader

UT Dallas - Richardson, TX

August 2019 to May 2020

Designed smart skateboard with object detection using LIDAR camera sensor, geolocation feature with GSM module and cellular network using SIM card and regenerative braking using Vetter Electronic Speed Controller (VESC tool).

- Integrated hardware components and designed the structural model for the skateboard to ensure optimized performance and safety. This includes making sure the components were compact and water resistant.
- Utilized Agile and SCRUM based software design principles for thorough testing and development procedures.

Embedded Systems Engineer Intern

American HomeSecures, Inc

December 2018 to March 2019

- Developed software for TI microcontrollers and Raspberry Pi extensively using Python, C# and embedded C in TI CCS.
- Contributed and improved upon the development of a smart IoT-based home security system, including a central hub and peripherals such as door sensors, motion sensors, IP cameras and a key fob.
- Created a user-friendly and intuitive GUI for the central hub as well as developed code for reliable serial and socket communication between system devices utilizing Wi-Fi, 4G LTE and Bluetooth Low Energy protocols.
- Contributed to development of an Android application that uses the RPi and RF receivers to send POST requests to a RESTful API cloud-based web server that stores door open & motion sensor events by date and time.

Computer Networks Project -

File Transfer Protocol (FTP)

August 2018 to December 2018

Developed an FTP program based on TCP protocol using socket programming. The program establishes a connection between a client and server that has files to send. This connection uses a listener function and matching port numbers to begin the FTP.

- Uses 3 duplicate ACKs system along with fast retransmission upon dropping a packet while also having a receive/timeout function to handle their respective duties. Includes a CheckSum generator to ensure the data matches after transmission.

Java Project

Java IRC API Bot

January 2018 to April 2018

- Made use of RESTful API web requests and JSON parsing to get the current weather/temperature from an inputted city.
- Created interfaceable chat bot using IRC protocol, Java.Net library and FreeNode client to host bot. The bot detects if a zip code is input and uses the REST API and JSON parsing to return the current temperature conditions of the requested area.

Microcontroller Project -

Self Driving Robot

January 2017 to May 2017

- Utilized TI MSP432 MCU and TI CCS in embedded C to create self-driving robot with functional turn blinkers and line sensor.
- Device had to solve complex maze following a black line using the line sensor and blinkers. Judged as exceptionally functional.

Leadership and Volunteering

Institute of Electrical and Electronics Engineers

October 2014 to May 2017

- Organized tutoring materials for undergraduate engineering courses to assist students struggling with coursework.
- Assisted other students who needed guidance on certain complex subject matters such as circuit analysis and coding concepts.
- Organized meetings on occasion to draw membership into IEEE and build a better community for Electrical/Computer Engineers.

Education

Bachelor of Science in Computer Engineering

The University of Texas - Dallas, TX

May 2020

Skills

- C
- C++
- C#
- Java
- JavaScript
- Python
- SQL
- Assembly
- REST API

- JSON
- Object-Oriented Programming
Applications/Hardware: MATLAB
- .NET Framework
- Azure
- Windows
- MacOS
- Linux
- Android Studio
- Verilog
- Visual Studio
- TI
Code Composer Studio
- Wireshark
- Xilinx ISE
- PSPICE
- LabView
- GIT
- MS Office
- Raspberry Pi
- ARM Cortex

RELEVANT COURSES Software Engineering

- Electrical Network Analysis
- Computer Networks
- Digital Circuits
- Computer Architecture
- Embedded
Microcontrollers
- Signals and Systems
- Ethics in Engineering
- Data Structures and Algorithms
- Operating Systems
- Senior Design