

Fahad Asat

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Education

California State University, Northridge

Dec 2020

B.S. Degree Candidate - Computer Engineering

Clubs: VexU Robotics - Matabots

Major Courses:

System on Chip Design | FPGA/ASIC Design and Optimization using VHDL | Digital Design with Verilog and SystemVerilog | Design of Digital Computers | Probabilistic Systems | Digital Electronics

Work Experience

Robotics Instructor – Great Minds Robotics

12/18 - 6/20

- Educated students in the field of robotics by teaching them how to build and program robots in object oriented programming languages such as C.
- Mentored kids in Lego NXT, Lego EV3, and RobotC.

Areté Associates - Engineering/Scientist Assistant

6/19 - 8/19

- Tasks included using AWS softwares such as EC2, S3, and Lambda to create Linux instances with Docker containers in a VPC.
- Converted manual Cyber Security guide steps into Ansible playbooks.
- Researched Twistlock and how to integrate it with Docker Enterprise/RHEL containers and determined if the combination of twistlock.com and Docker Enterprise meet the NIST 800-190 requirements.

Projects

8-Bit Computer

- Designed and built an 8-bit breadboard computer with ADD/SUB/AND instructions.
- Computer parts designed were the program counter, memory address register, memory buffer register, arithmetic logic unit containing an accumulator, input register, output register to 7 segment displays, bus architecture, and control unit containing the instruction register and various control logic.
- Used flip/flops, registers, bus transceivers, adders, logic gates, ATtiny, dip switches, etc.

Japanese Language Program (Java)

- Tests users proficiency in Japanese Vocabulary, Kanji, Listening, Writing, and Reading.
- Users are tested from elementary to an advanced level of Japanese.

Text Bot for CSUN Students Discord Channel (Python/JavaScript)

- Scrapes data from the CSUN website such as calendar events and displays them to the user.
- Holds RPG and trivia games such as Pokémon in a text based environment.
- A chatbot ai provides resources such as maps, study centers, water refill stations, etc.

Electric Longboard

- Designed, cut, and painted the longboard, drive train, and casing.
- Electronics include a brushless DC motor connected to an electronic speed controller powered by 2 lipo-batteries in series controlled by a 2.4Ghz radio remote control.

Technical Skills

Java | Python | C | JavaScript | VHDL | Verilog | SystemVerilog | Git | Object-oriented Programming and Design | Linux | MATLAB | Arduino | Raspberry Pi | AWS (EC2, S3, Lambda, VPC)