**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**

**Great Minds Robotics - Robotics Instructor 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 Intern - Remote 6/19 - 8/19**

* Tasks included using AWS software 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 user's 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)