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Objective: Computer engineering graduate student with experienced mechanical engineering background seeking internship position in computer engineering.

Education:

Master of Science in Computer Engineering (MSCE) - University of Houston, Houston, TX December 2022
Master of Science in Mechanical Engineering (MSME) - University of Houston, Houston, TX December 2018
Bachelor of Science in Mechanical Engineering (BSME) - University of Houston, Houston, TX May 2014

Computer Engineering Projects:

FPGA-based Memory Game January – May 2021

- Led a team in Advanced Digital Design class to build a number-memory game on FPGA using Verilog.
- Collaborated with teammates to finalize system architecture, and divided workloads to design sequential and combinational logic modules with finite-state machine (RAM access, LFSR random number generator, FIFO, etc.).
- Wrote testbench and simulated input/outputs in ModelSim for verification before synthesis. The project was completed, and the game worked as intended.

Bluetooth-Controlled Robot January – May 2021

- Applied embedded system design knowledge to build a robot with Real-Time OS implementation. The robot can move in left, right, forward, and backward position using an App to control; it can also detect move along the lines.
- Programmed the Ti MSP432 microcontroller in C to interface with Bluetooth modules, motors, buttons, and sensors.
- Utilized FreeRTOS to perform round-robin tasks: retrieving BLE signals and reading sensor signals, including interrupts to stop any motion when facing obstacles.

Robotic Arm Control September – December 2021

- Created a 3-links robotic arm which used a camera to recognize number on a dice, and flipped it to a designated face.
- Programmed Arduino board to move each axis with servo motors and read potentiometers as sensors for movement.
- Developed MATLAB script to process captured image and identified the face by calculating centroids and find orientation.

Professional Experience:

UNIVERSITY OF HOUSTON - **Researcher** June 2021 - Current

- Trained datasets using binarized convolution neural network to detect and categorize material defects for applications in real-time inspection for the manufacturing environment.
- Extracted convolution layers after training in Python, and optimized algorithms to compute layers in FPGA by combining Cortex-M codes with HDL modules to minimize execution time.

HALLIBURTON - **Sustaining Engineer** June 2018 - May 2020

- Implemented sustaining engineering projects by proposing design updates to existing drilling equipment, performing root-cause analysis of failures, and monitoring the effectiveness of improvements to the product's life and efficiency.
- Minimized production delays by resolving technical issues from non-conformity report from manufacturing and vendors.
- Verified design at R&D lab by developing test plan, test fixtures, and worked with technicians to conduct testing.

SCHLUMBERGER /ONESUBSEA - **Design Engineer** February 2015 - June 2017

- Provided technical engineering expertise to develop and test subsea production system across various stages of product life cycles: product development, project execution, testing, and aftermarket supports.
- Coordinated with team members to deliver detailed structural design, including FEA simulation with hand-calculation to verify; created models and machining drawings utilizing Inventor and GD&T.

Skills:

- **Programming Languages** Python, C, C++, Java, R, HTML, CSS, VBA, MATLAB
- **Development Tools** Verilog, ModelSim, SolidWorks, Creo, Arduino, Android Studio, AutoCAD, ANSYS