Vinh Hoang

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Education / Certification

Master of Science in Computer and System Engineering (MSCSE) Expected December 2021
University of Houston, Houston, TX – GPA 3.7
Courses**:** Computer Architecture, VHDL, Robotics, Digital Design, Control, Machine Learning, Embedded System

Master of Science (MSME) and Bachelor of Science in Mechanical Engineering (BSME)
University of Houston, Houston, TX – GPA 3.8

Certification, Engineer-In-Training (FE) No. 50730

Skills

Languages	Python, C, C++, Java, VBA, R, HTML, CSS
Development Tools	Verilog, SolidWorks, Creo, Quartus Prime, Arduino, Android Studio, AutoCAD
Technical Tools	ANSYS, Fluent, AutoPipe, STAAD, MATLAB

Experience

UNIVERSITY OF HOUSTON, Houston, TX 2020 - Current

Master Thesis Research
- Optimized machine learning and computer vision method and applied on FPGA to detect material defects in real-time.
- Derived neural network layers using Python and coded in Verilog to synthesis on FPGA to accelerate computation time.

HALLIBURTON, Houston, TX 2018 - 2020

Mechanical Engineer
Executed new product development projects. Designed test fixture and oversaw qualification tests. Solved non-conformance issues for field and manufacturing. Upgraded existing products to increase product's life and efficiency.
- Saved up to 60% in manufacturing cost and increased product service life by improving existing parts, including switching to more cost-effective hydraulic oil and coating pressure casing for erosion protection.
- Minimized production delays by resolving disposition for non-conformity report from manufacturing and vendors.
- Led vibration qualification test of new product, including designing test fixture, conducting test, and documenting reports.

SCHLUMBERGER - ONESUBSEA, Houston, TX 2015 - 2017

Design Engineer
Provided technical engineering expertise to create mechanical products in various stages in product life cycle
- Coordinated and delivered detailed structural design to customer while meeting project deadlines, performing structural analysis, simulation, drafting using Inventor, and hosting design reviews with customers.
- Verified equipment interface at system level by performing tolerance stack-up analysis, generating drawings, and providing engineering support at manufacturing plant.

Academic Projects

FPGA-based Memory Game
- Designed a FPGA-based memory game in Verilog, featuring authentication modules, FIFO, shift register, RAM, and ROM
- Created system-level and sub-modules with state-machine design approach; created test-bench for verification.

Embedded Bluetooth-Controlled Robot
- Programmed a robot controlled by Bluetooth Low Energy. The project was coded in C++ using Ti MSP432 Microcontroller interfacing with DC motors, power regulator, sensors, and Bluetooth module.
- Implemented real-time operating system, allowing the system to run round-robin tasks: monitoring BLE signal and reading sensor signals, including interrupts to stop the robot when hitting an obstacle.