WASEEM ORPHALI

Phone: (973) 420-3434 | **Email**: waseemorphali@gmail.com | **Website**: waseemorphali.github.io/my-portfolio
Github: https://github.com/waseemorphali | **LinkedIn:** www.linkedin.com/in/worphali

Electrical Engineer (M.S.) with proven software and hardware skills. Motivated team player who excels supporting innovative designs and applications, while possessing a wide range of technical skills.

- Deadline-Driven, Self-Starter
- Root/Cause Analysis
- Diplomatic Problem Solver
- Testing Protocols
- Digital Circuit Design
- Digital Circuit Simulation
- Control Systems & Prototyping
- Strong Interpersonal Skills
- Collaborative Team Player
- Excellent Communication Skills
- Impeccable Attention to Details
- Bilingual: English, Arabic

Degree: **Master's, Electrical Engineering**, New Jersey Institute of Technology (2018)
Technologies: Verilog, VHDL, FPGA, C, Python, Assembly, HSPICE, Linux, RTOS, Arduino, Raspberry Pi, Matlab, PLC Programming, Mentor Graphics, VLSI Design, Git, Jira, Fusion 360, Microsoft Office

EXPERIENCE

Associate Engineer **03/2020 – Present**
L&T Technology Services **Windsor Locks, CT**

- Responsible for troubleshooting and testing various flight control computer boards.
- Run performance and environmental stress tests.
- Coordinate between different groups to implement engineering changes and board reworks.
- Member of the FPGA & Embedded Systems team supporting Collins Aerospace and providing FPGA solutions using VHDL and Verilog.
- As part of a team, implemented the following communication protocols and interfaces on Nexys A7 FPGA board: HDLC, AXI4-Lite, SPI, CAN, UART.
- Received training on DO-254 standards which included documentation standards and the use of agile development tools: Git, Github, Jira, DOORS.

Senior Coach **01/2019 - 10/2019**
TechGarage **Boca Raton, FL**

- Mentored and guided high school students through design, testing and iteration with coding, Arduino microprocessors, 3-D modeling and 3-D printing.
- Supervised and trained 3 junior coaches in Electronics, Coding and 3-D printing.

EDUCATION

Master of Science, Electrical Engineering (2018)
New Jersey Institute of Technology
GPA 3.95/4.0

Bachelor of Science, Electrical Engineering (2015)
King Fahd University of Petroleum and Minerals
GPA 3.12/4.0

INTERNSHIP

Grundfos Gulf Distribution | Dubai, UAE **Summer 2015**
Actively participated with the production team assembling, testing, and fixing water pumps.

PROJECTS

2021 **MIPS Processor:** Developing a MIPS processor on ZYNQ SOC using FPGA fabric and ARM Cortex A9.
2020 **UART Controller:** Developed and implemented a UART interface to be used for communication and debugging.
2020 **AXI-SPI Core:** Working in a team, developed an FPGA core to interface between AXI and SPI protocols in VHDL.
2020 **HDLC in FPGA:** Developed an FPGA core to interface with HDLC communication protocol in VHDL.
2019 **IOT AC Controller:** Made an interface of our old AC thermostat so that it can be controlled using Wi-Fi.
2019 **Chores Tracker Using PIC16f88 MCU**: Designed a system to keep track of chores in the house.
2018 **Implemented CRC on Intel's FPGA Board**: Executed Cyclic Redundancy Check algorithm using VHDL.
2018 **Tree Pattern Matching**: Implemented a tree pattern matching algorithm from a research paper using VHDL.
2018 **Computer Gaming**: Created a Mine Sweeper game replicating the classic Windows Mine Sweeper using Python.
2017 **Wearable Augmented Reality System**: Designed a simple augmented reality system using available components
2015 **Visually Servoed Toy Car**: Used Matlab to guide a normal RC toy car to selected positions automatically.