Ghassan Younes

BSCE

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Skills

Languages & APIs

C/C++ | C# | Java
Zsh | Bash | LaTeX
Rust | Swift | Perl
Matlab | Python
HTML | CSS
JavaScript | Node.js
PHP | JQuery
Vulkan | OpenGL
amd64/Arm Assembly
SystemVerilog
Embedded C/C++

Protocols

LTSpice
USB / USB-HID
DHCP | DNS
HTTP(S) | (S)FTP
UART | ZigBee
I^2C | SPI | CAN

Operating Systems

Linux | BSD
Windows | macOS
Real-Time Operating Systems

Equipment

Oscilloscopes
PCB Mills
Board Bringup
3D Printing
Logic Analyzers
Circuit Testing Equipment

CAD and Modeling Software

EagleCAD | KiCAD
Fusion360 | OpenSCAD

Knowledge Base

FPGA
Control Systems
Digital Signal Processing
Algorithms
Git & SVN Source Control
Bare-Metal Programming
Microcontroller Firmware

Soft Skills

Teamwork
Task Delegation
Problem-solving

Professional Experience

Teaching Assistant, CS 100 - DigiPen Institute of Technology ..... June 2020 - Present

- Assembled and tested lab kits involving the TIVA-C 123 microcontroller to send to incoming students
- Programmed and tested assignments/exams in ARM Assembly to interface with the TM4C123 launchpad development board from Texas Instruments
- Constructed and tested simple circuits involving switches and relays
- Collaborated with professors to assemble kits on time

Computer Engineering Lab Assistant - DigiPen Institute of Technology ..... August 2020 - Present

- Maintained cleanliness and organization of the Engineering labs
- Restructured and optimized organization of the labs to ensure optimal ergonomic access and accessibility
- Familiarized myself with part-ordering process to ensure constant stock of consumable parts

Tutor in Math, Physics, Computer Science, and Engineering - DigiPen Institute of Technology ..... August 2020 - Present

- Assisted students in understanding core concepts from courses I had previously taken
- Encouraged students to ask for help and approach problems in new ways

Academic Projects

DART: Dubatron Autonomous Remote Tank - Lead Engineer ..... January 2022 - July 2022

Goal: Modify the previous year's custom controller with a 'tank' (a small tread-based vehicle) to control it wirelessly with the gyroscope. The tank will override user control to avoid collisions by using infrared and ultrasonic sensors.

Custom Video Game Controller - Lead Engineer ..... August 2020 - May 2021

Goal: Create a new and unique experience for playing a 2D-platformer game, and then expand capabilities to work as a generic controller, involves design and population of a PCB and chassis CAD model

High-Altitude Solar Array - Hardware Engineer ..... January 2020 - May 2020

Goal: Design and build a device with size and weight constraints for use in a high-altitude (35km) balloon using a PIC-8 Microntroller to read in values from a custom voltmeter and ammeter using ADC, and a cricketsat 555 circuit paired with an antenna to transmit data to the ground station

Education

Bachelor of Science in Computer Engineering - DigiPen Institute of Technology ..... Expected May 2023

Redmond WA, USA.
ABET/EAC Accredited program.