Ghamr Saeed

Contact

ghamr.saeed@mail.utoronto.ca
(613) 539-9738
251 Bedford Rd, Toronto, Ontario, M5R 2L3

Education

PEY Electrical and Computer Engineering at the University of Toronto Class of 2023+Co-Op

Key Skills

C, C++, Python, ARM, Pytorch, Arduino C, ROS, ROS Serial, Circuit design, tcshell, bash, Fusion 360, Fusion Eagle, LT-spice, circuit design tools, command line tools, vim, Assembly, Linux, C for ARM, GDB, Kotlin, Swift-UI, communication, organization, and team management

BMO National Scholar

Recipient of a scholarship valued at $80,000. Received for excellence in academics and extracurricular activities.

Relevant Courses

C/C++/Python

ECE344: Operating Systems (C, GDB)
- Created a threads library
- Worked with the Linux Kernel to develop a recursive directory copying algorithm.
- Learned about different hardware abstractions.

ECE297: Communication and Design (C++)
- Develop a geographic interface system application (similar to google maps)
- Used APIs to visualize cities and their geographical features.

APS360: Applied Fundamentals of Machine Learning (Python, Pytorch)
- Learning how to solve several types of machine learning problems using Pytorch

Assembly/Logic/Algorithms

ECE241: Digital Systems
- Logic gates, Adders, MUXs, Registers, ALU, memory, etc.

ECE243: Computer Organization
- Wrote the code for a game in C for ARM (has the same idea as a game called amaze) utilizing displays and keyboard.
- Interacted with display using Arm Assembly.
- Learned about buffers and some simple ways to deal with aliasing

ECE345: Algorithms and Data structures
- Complexity analysis and design of different algorithmic techniques and data structures
- Greedy algorithms, Dynamic programming, Hash tables, trees, etc.

Work experience

Full chip floor planning co-op (AMD, May 2022 – present):

Placed pins, rams, and macro circuits using different tools from Synopsis such as ICC2, Fusion Compiler.
Wrote TCL, PERL, tcsh, Python, awk, and sed scripts and used different command line tools to create scripts that automated repetitive daily tasks. Examples include reducing an 8 hour task to approximately 2 and reducing a 1 hour task to 5 minutes (tool loading time)

Personal Projects

Original Quiz Bowl buzzer system:

Used logic gates, registers, diodes, passive components, and 555-timers to create an original Quiz Bowl buzzer system on breadboards.
Designed the system again using Arduino Nanos communicating through I2C to make it modular for up to 8 players. Designed and 3D printed a chassis and soldered components.

Leadership and Club Experience

UTRA: ART (Embedded Subdivision Lead 2021 – present):
I lead a team of 10 people that implements the electrical and embedded infrastructure of Caffeine (our autonomous rover). The rover will participate in the IGVC.
University of Toronto Project Holodeck:
Wrote Arduino code and designed and built the circuit for a drumming arcade machine also spearheaded major design components.