-

ELIA CHENG

647-618-7658 ⋄ Toronto, ON
elia.echeng@gmail.com ⋄ https://linkedin.com/in/elia-cheng

EDUCATION

Bachelors of Applied Science and Engineering, University of Toronto — Sept 2021 - Expected 2026
Minor in Engineering Business, PEY Co-Op Program

Relevant Coursework: Data Structures and Algorithms, Operating Systems, Computer Organization, Digital Electronics, Computer Networks

SKILLS

Technical Skills	**C, C++, Python**, MATLAB, Java, ARM Assembly, Perl, Ruby, TCL, Verilog, Systemverilog
Technologies	Synopsys VC Static, Synopsys Verdi, Synopsys VC Formal, Multisim, Git, Perforce
Soft Skills	Communication, Public Speaking, Leadership, Time Management, Project Management

EXPERIENCE

SOC DFX Engineer Intern — May 2024 - Aug 2025
AMD, working on AMD Instinct MI450 AI Accelerators — *Markham, ON*

- Developed, optimized and maintained scripts for large scale design automation to adapt dynamically across chiplets
- Wrote and reviewed design verification test plans for complex ASIC DFX features for BISTs and embedded memory (SMS)
- Developed and maintained SOC-level verification infrastructure, test cases and regression testing
- Simulated and debugged RTL logic through Synopsys VCS and Verdi
- Adapted new Python framework to replace C++ test sequences
- Integrated VC Formal tool into current DFT flow for better time and memory management of pin connectivity checks

Junior DEEP Instructor — Apr 2022 - Aug 2022
University of Toronto Engineering Outreach — *Toronto, ON*

- Taught students from grades 5 to 6 fundamental engineering concepts with a focus on electrical and computer engineering
- Created activities and lessons that are fun and engaging while proficiently explaining the engineering process, programming (C and Python) and electrical physics
- Helped encourage a career path in STEM by demonstrating the joys of engineering's problem solving and innovating nature

PROJECTS

GIS Tool Worked with a team of 3 to create a map (like Google Maps or MapQuest) from scratch using C++ and Git. Used GTK and EZGL to create the GUI of the map. Had a strong focus on program optimization and implementation of various C++ libraries for better program efficiency. Incorporated the **Dijkstra, A* and Greedy Algorithm** to solve the travelling salesman problem

Puzzle Game Embedded a C program to work with a DE1-SOC FPGA board to play a puzzle game through a VGA display. Used the DE1-SOC as a controller and used various parts such as HEX displays, push buttons and switches. Used C to connect the components of the FPGA board to correspond with the VGA display as well as coding the game mechanics (select a piece, place it, remove it, start over)