Brian Chu

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EDUCATION

University of Toronto   Sep 2020 – May 2025
Bachelor of Applied Science in Computer Engineering (Pursuing a minor in Artificial Intelligence)   GPA: 3.75
- **Received Dean's Honour List for all completed semesters**
- **Relevant Coursework**: Algorithms and Data Structures, Introduction to Machine Learning, Operating Systems, Software Communication and Design, Digital Systems, Computer Organization, Computer Networks, Introduction to AI, Programming Fundamentals

SKILLS

Technical:
- **Programming**: C, C++, C#, Python, TCL, .NET, HTML, CSS, JSON, MSSQL, Neo4j, ARM Assembly, Verilog, ModelSim, Matlab
- **Other:** GIT, Perforce, Linux, Multisim, Typhoon HIL, Microsoft Office

Languages: Cantonese (Native), English (Native), Mandarin (Full professional proficiency)

EXPERIENCE

Intel   San Jose, California (Hybrid)
Software Engineer – PEY Intern (Design Automation team)   May 2023 – Present
- Developing python scripts to automate FPGA design workflows and FPGA software specific collateral generation, significantly reducing production cycle time of FPGAs
- Implementing TCL and python scripts to support static timing analysis for new-generation FPGAs, enabling rapid visualization and analysis of timing results
- Developing in-house python tools to verify design intent of FPGAs, streamlining the FPGA production process

University of Toronto   Toronto, ON (In-person)
Teaching Assistant in MAT188 (Linear Algebra)   Sept 2022 – Dec 2022
- Taught students concepts such as Gaussian elimination, linear transformations, eigenvalues, Gram-Schmidt process, and diagonalization of symmetric matrices in weekly tutorials
- Graded assignments and exams for first year engineering students

Maxus International Systems   Vancouver, BC (Remote)
Software Engineering Intern   May 2022 – August 2022
- Automated the processes for generating survey reports and anonymizing the company's database in MSSQL using C#, Neo4j , and .NET framework, substantially improving company production efficiency
- Developed an object detection machine learning solution with YOLOV5 model and Python to identify construction materials for a proprietary software, minimizing human errors for the object identification

Engineering Student Outreach Office, University of Toronto   Toronto, ON (Remote)
Math Academic Mentor for incoming engineering students   May 2021 – August 2021
- Held weekly tutorials and graded assignments pertaining to linear algebra and calculus

PROJECTS

Geographic Information System in ECE297 (Software and Communication)   January 2022 – April 2022
- Created an interactive GIS tool with C++ which offers path finding, route visualization and location searching
- Co-designed the frontend and backend with GTK, Glade and the EZGL graphics package
- Developed A*, 3-Opt and multi-start greedy based heuristics for the travelling salesman problem

Processor with extended capabilities in ECE243 (Computer Organization)   April 2022
- Co-designed a processor in Verilog which supports subroutines, stacks, shift and rotate

EXTRA-CURRICULAR ACTIVITIES

University of Toronto Aerospace Team (Satellite Division) | Sep 2020 – May 2021   September 2020 – May 2021
- Researched for redundancy measures in electrical systems to increase the reliability of the satellite project