Andrew Yeung

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EDUCATION

University of Toronto   Sep 2024 – Apr 2029
BASc in Electrical & Computer Engineering + PEY Co-op   *Toronto, ON*
- Cumulative cGPA: **3.90/4.0**, Ranked **Top 30** in Electrical & Computer Engineering Department
- Dean's Honour List (2024 Fall, 2025 Winter)
- Courses: Digital Systems (Verilog, FPGAs), Programming Fundamentals (C++), Introductory Electronics (LTspice)

EXPERIENCE

Logistics Lead Executive   Sep 2025 – Present
Engineers Without Borders University of Toronto   *Toronto, ON*
- Coordinated end-to-end logistics for **Hack Without Borders**, a university-level hackathon for University of Toronto students, overseeing **venue setup**, **scheduling**, **budgeting**, and **sponsor communication**.
- Collaborated closely with technical and marketing leads to align event needs and timelines, using **critical thinking** to prioritize logistics decisions and ensure smooth participant experience throughout the hackathon.

Da Vinci Engineering Enrichment Program Instructor   May 2025 – Aug 2025
University of Toronto Engineering Outreach Office   *Toronto, ON*
- Developed and instructed a program to teach **AI** and **coding** in **Python** to incoming high school students, focusing on concepts such as **algorithms** and **data structures**.
- Delivered engaging, inquiry-based instruction to diverse student groups, adapting content to different academic levels and learning styles to foster **critical thinking**, **creativity**, **and problem-solving**.

PROJECTS

Sorting Algorithm Visualizer | *Verilog, FPGAs (DE1-SoC), Quartus Prime, ModelSim*   Nov 2025 – Dec 2025
- Implemented a fully functional **bubble and insertion sort simulator** with graphics and user input using **Verilog**, the **DE1-SoC FPGA**, and a **VGA output monitor**.
- Used **finite state machines (FSMs)**, **registers**, and **combinational logic** to control algorithm flow, display dynamic sorting animations as bar graph rectangles, and handle real-time user interactions.
- Verified correctness through **ModelSim** and **DESim** simulations and hardware testing, debugging **timing issues** and validating module logic before project compilation on **Quartus Prime**.

Wearable Speech Translation Device | *Python, Arduino, APIs, TMRpcm*   Jan 2025 – Feb 2025
- Developed a real-time wearable speech translation device within a 24-hour makeathon, integrating **microcontrollers**, **machine learning**, and **assistive technology design** to translate spoken input into multilingual audio output in real time.
- Implemented **Faster Whisper** for speech recognition and transcription, with **Arduino + TMRpcm** for audio I/O, **SD card storage**, **Google Translate API** for multilingual translation, and **Python serial communication** for hardware–software integration.

Battleship AI Engine | *Java, Swing (GUI), OOP, Git, JUnit, Gradle*   Apr 2024 – Jun 2024
- Developed a graphical Battleship game in **Java** using **Swing** for UI, custom audio, and keyboard-based player controls, applying **object-oriented** design to structure game logic and user interaction.
- Implemented path-finding **AI** with **memoization** to optimize move selection and adapt to player behavior, reducing redundant computations and improving decision speed in real time.
- Developed **real-time multiplayer mode** supporting **AI vs. human matches**, and implemented save/load functionality using **.txt files** to restore previous game states for continued play.

SKILLS

Languages: Verilog, C++, C, Java, Python, JavaScript, HTML/CSS

Developer Tools: Quartus Prime, ModelSim, LTspice, VS Code, KiCad, Git, Arduino IDE, DESim, MATLAB

Professional Skills: Teamwork, Collaboration, Critical Thinking, Adaptability, Initiative, Leadership