# Yezhong (Jonathan) Gao

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## PROFILE

I am a dedicated 4th-year Electrical and Computer Engineering student at the University of Toronto, with a strong foundation in computer software and experience with computer hardware. Anticipating graduation in 2025, I have gained practical experience during internship at AMD Inc. and projects. My technical skills include proficiency in C++ and Python, alongside hands-on experience with machine learning and embedded programming. I am seeking opportunities where I can contribute to innovative engineering solutions and further develop my skills in both computer software and hardware.

## EDUCATION

University of Toronto, Toronto, ON (2020 - 2025)
Bachelor of Applied Science (Minor in Artificial Intelligence, Certificate in Engineering Business)

## SKILLS

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|---|---|
| Computer Languages: | Python, C/C++, Swift, ARM Assembly, SQL, HTML, SystemVerilog |
| Libraries: | PyTorch, Pandas, NumPy |
| Tools: | Git, Perforce, Docker, Office Suite, Final Cut Pro, Confluence, Jama, Jira |
| OS: | Windows, macOS, Linux |
| Natural Languages: | English, Mandarin |

## EXPERIENCE

RTG SOC DV SMU Intern — AMD, Markham, ON — 2023/05-2024/08

- Tracked and triaged SOC tests' errors on **Confluence**.
- Took the initiative and developed, with a colleague, a new web tool for SOC tests' information display and errors categorization, using **Python, HTML,** and **SQL**.
- Took the initiative and developed a machine learning project that aimed to optimize test runtimes by tuning various SOC clocks' frequencies, using **Python**, **PyTorch**, and **pandas**.
- Wrote various utilities in **Python** to improve workflow efficiency
- Inherited and improved **Python** utility used to pull information from **Jama**.
- Written tests and API's using **C++**.
- Improved **Ruby**, **Perl** and **Python** scripts that generated **System Verilog**.
- Reporting issues using **Jira**.
- Using **Perforce** and **Git** as version control systems.

IT Technician — HZ Technology Ltd., Saskatoon, SK — 2019/08-2020/08

- Maintained office PCs, networks and mobile devices.
- Set up PCs, projectors and microphones for use in video conferencing rooms.
- Performed installation, maintenance and repair for complex internal computer hardware and various software applications.
- Set up and maintained user accounts and client access.
- Recommended new and replacement hardware and software purchases.
- Explained technical information in clear terms to promote better understanding for non-technical users.

- Patiently walked individuals through basic troubleshooting tasks.
- Built PC's according to customer needs

Teaching Assistant — Heritage Chinese Language School, Saskatoon, SK — 2019/09-2020/03
- Assisted teachers with classroom management and document coordination to maintain positive learning environment.
- Implemented practice exercises and group assignments to assist students in quick information grasping.
- Communicated student progress to teacher and parents.

## PERSONAL & CLASS PROJECTS

Spoken Digits ML — 2022/07-2022/08 — Python, PyTorch, Git, macOS
- UI using Qt for **Python**
- CNN model using **PyTorch** in **Python**
- Audio processing using **Python**
- Mel Spectrogram generation using **Python**
- Version control using **Git**
- Development done on macOS

Game on DE1-SOC Board — 2022/03-2022/04 — C++, Windows
- Input with keyboard using interrupts, service routines written in **C++**
- Output using VGA with buffers, memory read/writes in **C++**
- Game logic written in **C++**
- Development done on Windows

GIS Software — 2022/01-2022/04 — C++, Git, Linux
- UI using GTK written in **C++**
- A* route finding written in **C++**
- Loading maps utilize multithreading written in **C++**
- Version control using **Git**
- Development done on Linux

## INTERESTS & HOBBIES

- Building PC's for myself or friends
- Playing guitar
- Playing badminton
- Singing

## RELEVANT COURSES

| | |
|---|---|
| Signals and Systems | Computer Organization |
| Algorithms & Data Structures | Computer Hardware |
| Applied Fundamentals of Deep Learning | Software Engineering |
| Computer System Programming | Computer Architecture |