# YUN JIA HAO

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## EDUCATION

**University of Toronto**                                                                                    Sep 2020 - May 2025 (With PEY Co-op)

*Bachelor of Applied Sciences, 3rd year Computer Engineering, Cumulative GPA: 3.95, Dean's Honor List*

- **Relevant Courses:** Operating Systems (A), Data Structures and Algorithms (A+), Introduction to Relational Databases (A-), Computer Networks (A)
- **Awards:** First Year Summer Fellowship(<10% acceptance rate), Walter Scott Guest Memorial Scholarship (academic merit)

## TECHINICAL SKILLS

- **Languages & Tools:** C, C++, JavaScript, Python, Git, MATLAB, SQL, Machine Learning, Perl

## WORK EXPERIENCES

**Intel**                                                                                                                                    Toronto, ON

Software Engineer Intern                                                                                                    May 2023 – Present

- Led critical data analysis and updates for multiple devices in Intel's Quartus Prime Software, ensuring consistently updated timing data for enhanced performance.
- Devised and improved Python, Perl, and C++ scripts accelerating the data update process by over 30%
- Developed rigorous regression and unit tests for the developed tools, ensuring the reliability and integrity of FPGA design processes while maintaining the highest standards of precision.

**PTC**                                                                                                                                    Montreal, QC

Software Engineer Intern                                                                                            June 2022 – August 2022

- Co-engineered a testing framework from scratch that fundamentally transformed the approach to component-based testing on Thingworx, an IIoT platform.
- Documented, conceptualized, and presented a novel testing model that seamlessly transitioned substantial tests from JUnit to Thingworx, yielding a projected 30% improvement in development efficiency.
- Implemented features enabling visualizations of customizations and deprecations on Out-of-the-Box (OOTB) components using JavaScript, providing invaluable assistance to developers in navigating software updates.

**University of Toronto**                                                                                                        Toronto, ON

Machine Learning Research Intern                                                                            May 2021 – August 2021

- Co-authored research paper for INFOCOM 2022 on the design of *Axiothea*, a 3-layer cross silo federated learning framework used in machine learning.
- Utilized Python to implement methods like federated averaging and quantization, which improved model security and reduced communication overhead by up to 65.28% on machine learning datasets.

## PROJECTS

**Mapping Application**

- Developed a GIS program, harnessing the ArcGIS API and C++, facilitating area visualization for diverse cities by incorporating points of interest, intersections, and street names.
- Utilized optimization mathematics to implement path-finding algorithms like Dijkstra's and A*; Explored strategies like genetic algorithms for solving the travelling courier problem, achieving a top 20% class ranking in algorithmic speed.
- Designed an intuitive user interface while utilizing tools like Git and Scrum-based project management techniques.

**Text Conferencing Application**

- Created a robust system using UNIX TCP sockets in C that enables multiple users to log in with credentials, participate in group chats, invite others to join discussions, and conveniently view the list of currently online users.

## VOLUNTEER EXPERIENCES

**Webmaster**, Ontario Engineering Competition 2022                                            June 2021- January 2022

- Led development of an engaging competition website using Squarespace, HTML, and CSS, driving 3000+ site visits with its captivating and user-friendly design.
- Worked closely with cross-functional teams including marketing, and logistics, ensuring the alignment of website content with the overall theme.

**Team Leader**, Engineering Strategies and Practices, UofT                          September 2020 – December 2020

- Led a team of 5 students through weekly meetings, task assignments, and expectations, ensuring effective collaboration and project advancement.
- Engineered a novel locking system for Toronto's green bins to prevent raccoon access, scoring an above average design and a practical solution.