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: 3.97

- First Year Summer Fellowship - $7000 (Awarded to up to 10 first year research students)
- Walter Scott Guest Memorial Scholarship - $5,000 (Awarded based on academic merit)
- **Relevant Courses:** Programming Fundamentals, Software Communication and Design, Signals and Systems, Computer Organization, Linear Algebra

TECHINICAL SKILLS

- **Languages & Tools:** C, C++, Java, Python, Git, GitHub, Pytorch, Verilog, ARM Assembly, MS Office, MATLAB, HTML, CSS

PROJECTS

Personal Website

- Designed and implemented a personal website from scratch using HTML, CSS, and Bootstrap. Implemented an about me, projects, skills, and contact me page

Mapping Application

- Designed a GIS program which helps users plan routes and visualize areas for different cities using the ArcGIS API and C++.
- Implemented path-finding algorithms such as Dijkstra's and A* to compute the shortest path between two points and for solving the Traveling Courier Problem.

WORK EXPERIENCES

Research Assistant, University of Toronto **May 2021-August 2021**

- Co-authored research paper on the design of *Axiothea*, a 3-layer cross silo federated learning framework used in machine learning.
- Successfully implemented methods such as federated averaging and quantization using Python and Pytorch to improve the model's security and to reduce computational costs.
- Tested framework against machine learning models to improve the model performance.
- Final framework reduces communication overhead by up to 65.28% on the MNIST and FashionMNIST dataset

VOLUNTEER EXPERIENCES

Webmaster, Ontario Engineering Competition 2022 **2021-Present**

- Creating a website for over 300 competitors that is informative, visually appealing, and accessible using Squarespace, HTML, and CSS.
- Set up a Competitor's Portal and Innovative Design Showcase used during the virtual competition weekend.

Team Leader, Engineering Strategies and Practices Course, U of T **2020**

- Lead a team of 5 students to design an appliance which prevents raccoons from entering green bins in the City of Toronto.
- Lead weekly meetings, set meeting schedules, explained assignment expectations, and allocated tasks settings the team up for success.
- Introduced a new locking device to be installed on the bin to address problems faced by citizens with the current green bin