Shidu(Ryan) Ren

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Undergraduate 2nd Year Engineering Student

EDUCATION

Bachelor of Applied Science, **PEY Co-op -** [University of Toronto]   2023.09-2028.04

*Major in [**Computer Engineering**], Minor in [**Engineering Business & AI Engineering**]*

- Overall GPA: [**3.83**]
- **Relevant Courses**:
  APS360 Fundamentals of Deep Learning (**Pytorch**) || ECE297 Software Design and Communication (**C++/Git**) || ECE231 Intro. Electronics (**LTspice**) || ECE241 Digital Systems (**Verilog, FPGAs)**
- Academic Achievement:
  [**Kaggle AI Competition**: Binary Classification of Insurance Cross Selling, Rank: **60/2236**]
  [UofT Engineering Dean's Honours List for Every Semester **(Top 30)**]

PROFESSIONAL EXPERIENCE

[Pedestrian Simulation Software Development]   2024.07 – 2024.09
Beijing Urban Construction Group   *Beijing, China*
- Simulate passenger flow through various facilities in a metro system using **Java**
- Collected and analyzed statistical data on density, speed, and flow rate of passengers, understanding the efficiency of passenger flow in different scenarios.
- Enhanced proficiency in **JavaFX,** particularly in developing graphical simulations

[Embodied Intelligence Research Intern]   2024.06 – 2024.09
Beijing University of Posts and Telecommunications   *Remote*
- Researched the history, trends, challenges, and future of **embodied intelligence**, compiled findings into a comprehensive article
- Fine-tuned a model using the **YOLOv8** to recognize various buttons on an iPhone UI, implementing an automated food ordering feature
- Gained insights into embodied intelligence, enhancing research and writing skills

PROJECT EXPERIENCE

[Communication System Development: utek 2025 Programming Competition]   2025.1.18 – 1.19
Team Leader   *University of Toronto*
- **Led** a team to develop a **real-time communication platform** to assist residents and rescue teams during wildfire emergencies and achieved a **Top 8** placement in the competition
- **Designed and implemented** critical features such as an interactive map, real-time location tracking, and a two-way communication interface
- Contributed to front-end development using **Streamlit**. Oversaw the integration of backend **Flask services** and frontend Streamlit interfaces, ensuring **seamless data flow** and user experience

[Design Team: UTRA Autonomous Rover Team (ART)]   2023.09 - 2024.04
Embedded System Designer   *UTRA*
- Led design and implementation of the rover's **embedded system**, including **GPS integration**
- Researched and selected temperature sensors, designing **circuits for fault diagnostics**
- Explored **Arduino OS compatibility**, refining power management and interrupt-driven processing for **efficient resource utilization**.

SKILLS

- **Languages:** Python | Java | C/C++ | JavaScript | HTML/CSS | MATLAB | Verilog
- **Tools:** React | Pytorch | TensorFlow | Unity | Quartz | CUDA | IntelliJ IDEA | JavaFX | Git | Adobe | FPGAs | SQL | STL
- **Soft Skills:** Proven leadership and collaboration skills, strong verbal and written communication, critical thinking skills, innovative and open-minded