

# Tianhao Fu

[tianhao.fu@mail.utoronto.ca](mailto:tianhao.fu@mail.utoronto.ca) | [atatc.github.io](https://atatc.github.io) | [linkedin.com/in/tianhao-fu-957188279](https://linkedin.com/in/tianhao-fu-957188279) | [github.com/ATATC](https://github.com/ATATC)

## EDUCATION

<b>University of Toronto</b>	Toronto, ON
<i>Bachelor of Applied Science in Engineering Science (PEY Co-op)</i>	Sep 2025 – May 2029
<b>Villanova College</b>	King, ON
<i>OSSD and AP</i>	Sep 2022 – May 2025

## EXPERIENCE

<b>Research Team Lead</b>	Sep 2025 – Present
<i>University of Toronto Machine Intelligence Student Team</i>	<i>Toronto, ON</i>
• Developed the AIP Project (Automated Iterative Pseudo-labeling)	
<b>Research Scientist</b>	Aug 2024 – Present
<i>Vector Institute (Bo Wang Lab)</i>	<i>ON</i>
• Ranked 4th in the PANORAMA Challenge	
• Ranked 4th in the SegSTRONG-C Challenge	
• Helped with Fast nnU-Net	
<b>Chief</b>	Jun 2019 – Present
<i>Project Neura</i>	<i>Toronto, ON</i>
• Gathering researchers and developers to bring their ideas into reality	
• Developed MIP Candy (A Candy for Medical Image Processing)	
• Developed LEADS (Lightweight Embedded Assisted Driving System)	
• Built an infrastructure cloud compute platform with Docker	

## PROJECTS

<b>CIV102 Bridge Project</b>   <i>Python</i>	Nov 2025 – Dec 2025
• Top 1 in the cohort and 2nd in the class of 2025	
• Developed a complex cross-section composition and solving system	
• Developed a bridge solver	
• Calculated the optimal cross-section dimensions by turning the design into a COP (Convex Optimization Problem)	
<b>The AIP Project</b>   <i>Python, CUDA, PyTorch, Docker</i>	Sep 2025 – Present
• Proposed an innovative way to make pseudo-labeling more efficient and effective	
<b>MIP Candy</b>   <i>Python, CUDA, PyTorch, Triton</i>	Aug 2025 – Present
• Developed a framework that brings ready-to-use training, inference, and evaluation pipelines together with aesthetics, so users can focus on their experiments, not boilerplate	
• Developed a visualization system that helps the user see the complex data	
• Accelerated training with a preloading mechanism	
• Accelerated sliding window custom CUDA kernels	
<b>LEADS</b>   <i>Python, C++, JavaScript, FastAPI, Tkinter, Next.js</i>	Nov 2023 – Sep 2025
• Developed an onboard instrumentation system that displays data like the wheel speed	
• Developed a webpage dashboard that remotely monitors the vehicles' status from the Pit crew	
• Developed a multi-camera streaming and recording system	
• Developed support for saving and replaying vehicle data	
• Developed an efficient real-time data link using pure TCP/IP	
• Developed a data analysis tool set that teaches the driver how to drive	
• Customized the Ubuntu OS	
• Developed support for multiple screens	
• Developed GPS support	

## TECHNICAL SKILLS

**Languages:** Python, Java, C/C++, CUDA, JavaScript, HTML/CSS

**Frameworks:** PyTorch, Triton, Docker, Tkinter, FastAPI, React.js, Next.js