

Alex Zhang

First Year Engineering Science Student at the University of Toronto

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EDUCATION

University of Toronto

Expected Graduation Date: June 2029

Bachelor of Applied Science in Engineering Science (GPA: 3.73 / 4.0)

- Dean's List Scholar
- Relevant Coursework: Structures and Materials, Classical Mechanics, Electrical Circuits, Computer Programming (Python), Computer Algorithms and Data Structures

Ashbury College

Ontario High School and Full IB Diploma (GPA: 96/100, IB Grade: 43/45, SAT: 1550/1600)

Sept 2021 - June 2025

RESEARCH EXPERIENCE

National Research Council of Canada

June 2024 - Sept 2024

Aerospace Research Intern

- Investigated compression-after-impact (CAI) behavior of carbon fiber-reinforced composites.
- Results helped enhance understanding of how laminate ratios & configurations, impact size & force, and panel thickness affect CAI behavior, which can be used to develop high-fidelity residual strength models.
- Analyzed data, created all figures, presented findings, and wrote the discussion and conclusion sections of a published 60-page report on characterizing buckling responses of carbon fibre after CAI.
- Valid Security Clearance

University of Toronto Aerospace Team

Oct 2025 - Present

UAS Aerodynamics General Member

- Collaborated with 7 team members to optimize aerodynamics and manufacture the wings of U of T's plane for the SAE Aero Design Competition.
- Designed lighter, more manufacturable motor and servo mounting hardware, improving plane's efficiency.
- Used OpenVSP to evaluate aerodynamic trade-offs across wing shapes, with findings contributing the team's decision to adopt a new box-wing design.

University of Toronto Aerospace Brown University Pre-College Programs

July 2023

Advanced Topics in CAD: FEA, Motion, and Complex Assemblies

- Learned advanced CAD with Professor Waltz at Brown University for 3 weeks.
- Performed research project on biomimicry in strandbeests and created a working prototype using laser-cut and 3-D printed parts designed with Solidworks.

EXTRACURRICULARS

U of T Varsity Tennis Team

Sept 2025 - Present

- Starting player and sole freshman on men's tennis team.
- Helped U of T win OUA provincial gold (7-1 singles win loss record).

Academics Prefect

April 2024 - June 2025

- Student-elected prefect in charge of leading a student council to enhance academic student life at high school.
- Set up school-wide tutoring initiative and scheduled study rooms.

Design and Innovation Club Founder

September 2024 - June 2025

- Founded a new after-school club centred around CAD and designing solutions to promote sustainable stewardship at Ashbury College.
- Taught fundamentals of CAD (Fusion 360) to 20 club members.

TECHNICAL SKILLS

Programming Languages: Python, C, MatLab, LaTeX

Frameworks and Tools: Solidworks, Finite Element Analysis, OpenVSP