Tom Rotbart Manufacturing Engineering Student

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TECHNICAL SKILLS

Software: Star-CCM+, SolidWorks, Plant Simulation, Ansys Fluent, Python, HTML, CSS, JS
Hardware: Wind tunnels, Environmental chambers, Waterjet, CNC, Raspberry Pi, Arduino
Processes: CFD Analysis & Validation, Composite Manufacturing, MIG Welding

EDUCATION

University of British Columbia **Expected Graduation: April 2026**
Bachelor of Applied Science - Manufacturing Engineering, Commerce Minor

ENGINEERING STUDENT TEAMS

Formula UBC Racing, University of British Columbia **September 2020 – Present**
Aerodynamics Lead, Treasurer

- Leads a team of six engineering students through aerodynamic engineering design process consisting of researching, designing, developing, validating, and documenting a FSAE vehicle aero package
- Design and simulate dual pass single core radiator to validate cooling system of vehicle using Star-CCM+ heat exchangers and confirmed under ideal cooling conditions, 17kW of heat can be dissipated
- Simulate a sweep of Front Wing locations to validate undertray performance in 3D using Star-CCM+. Determined ride height of 12% chord length maximized rear diffuser efficiency at 4.17 L/D ratio

TECHNICAL PROJECTS

Website Portfolio, Personal **July 2021 – Present**

- Using HTML, CSS, JS, & jQuery to code a static website from scratch to be hosted on GitHub and updated with completed and ongoing projects

OTHER WORK EXPERIENCE

Paper Education Company, Montreal, QC **November 2020 – Present**
Tutor – Math/Science

- Tutoring students grade K-12 using Socratic methods in various topics within mathematics and physics via text and visual drawings online

VOLUNTEER EXPERIENCE

Youth Helping Youth, Surrey, BC **September 2019 – January 2022**
Information Technology Member, Record Keeper

- Collaborated with a team of 6 to deploy a secure and organized internal photo storage software using Django framework, HTML, CSS, & JS
- Created, taught, and implemented bookkeeping system for all seven North American branches after self-learning how to book-keep using Microsoft Excel

INTERESTS & ACTIVITIES

- Studying CFD Turbulence Modelling (Reading: Turbulence Modeling for CFD by David C. Wilcox)
- Watching Formula 1 and sim racing
- Ultimate Frisbee, Basketball, Speed Cubing (Rubik's cubes)