

# Shafwat Khan

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Univeristy Of Toronto Materials Engineering  
L'Amoreaux Collegiate Institute

2028 + Coop  
2024

## EXPERIENCE

### Engineering Support | Sable Metal Fabrication

May 2025 - Aug 2025

- Designed and modified 3D models for custom sheet metal parts using SolidWorks and nested for the laser using Lantek ensuring, manufacturability and efficiency.
- Conducted thermal and structural simulations on real-world components such as a slat-wall shelf, analyzing load-bearing capacity and optimizing design integrity.
- Assisted with a variety of hands-on fabrication tasks, including making jigs, laser bed maintenance, slatwall installation, 3D printing, and operating a brake press.
- Collaborated with shop employees to identify and resolve over 4 major workflow inefficiencies by designing and manufacturing custom creative solutions.

### Team Captain | FIRST Robotics Team

Sep 2022 - Jun 2024

- Captained a team of 60 students to design and manufacture 3 robots fit for competing at provincial-level competitions over 2 years.
- Trained 20+ new team members in machining, troubleshooting, and problem-solving under pressure for manufacturing during competition times and build season.
- Designed various components of the robot using OnShape and SolidWorks, which I later assembled and troubleshooted under time constraints and competition pressure.
- Operated and oversaw the operation of various machines such as bandsaws, drill presses, power tools, 3D printers, and CNC machines to fabricate components of the robot.

### Teacher Assistant | TDSB Reach Ahead

Jul 2023 - Aug 2023

- Evaluated more than 120 assessments submitted by Grade 8 students over one month, maintaining accuracy and fairness in the grading process.
- Guided and supervised groups of 10 students in various science and math activities to increase their interest in these subjects, demonstrating strong leadership and conflict resolution skills throughout these engagements.
- Taught mathematical concepts that supported the grade 8 students through their transition into high school, such as fractions, algebra, and linear graphing.

## SKILLS

Languages	Bangla (mother tongue), English (fluent)
Software	MATLAB, L <sup>A</sup> T <sub>E</sub> X, SOLIDWORKS, LANTEK EXPERT, JAVA, PYTHON, BEGINNER WEB DEV
Machinery	DRILL PRESS, 3D PRINTER, BANDSAWS, POWER TOOLS, TABLE SAW, MITRE SAW
Soft Skills	TROUBLESHOOTING, PROBLEM SOLVING, WORKING UNDER PRESSURE, QUICK LEARNER, EAGER TO LEARN

## PORTFOLIO

Website in progress;

Projects include: Exhaust Fan installation, Slatwall Shelf, Car Turbo Airflow Sim, i4 engine crankshaft, Laser Cable Management, Assembly Documentation.