

Alejandro Farfan

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SKILLS

Technical: SolidWorks, AutoCAD, C++, Python, Basic Machining, Calibration, Excel, Technical Documentation
Work: Spanish (Fluent), French (DELF B2), English (Fluent), Time Management, Problem Solving

PROJECTS

Compact Mechanical Billiards System | *SolidWorks, Prototyping, Machining, Woodworking* June 2025 - Dec 2025

- Designed a mechanical table-top launcher with adjustable thrust forces from 0.12–0.86 N based on 10–30 mm pullback distances.
- Validated through controlled coin-mass testing, demonstrating effective collaboration and application of mechanical design principles.
- Developed and tested the puncher, mount, and positioning subsystems through multiple CAD iterations, achieving 150° horizontal and 15° vertical rotation.
- Approved by 5+ member of the engineering teaching staff.

Rope-Brake Dynamometer | *Design, Data Analysis, Excel, Technical Documentation* June 2025 - Dec 2025

- Built and tested a rope-brake dynamometer to measure torque by combining a DC motor, elastic-band load cell, and water-bottle weighting system, calibrated using an elastic force curve.
- Conducted multiple load tests and plotted a torque–speed curve showing expected DC motor behaviour.

EDUCATION

University of Waterloo Waterloo, ON
Bachelor of Applied Science (BASc), Mechanical Engineering

- Relevant Coursework: Physics (Mechanics), Mechanical Engineering Practice 1, Introduction to Mechanical Engineering Practice 2, Structure and Properties of Materials.

Specialist High Skills Major Lead (SHSM) Oakville, ON
Mechatronics Engineering Program Sept 2023 – June 2025

- Participated in technical workshops using tools, machinery, and basic fabrication processes.
- Completed hands-on training in workplace safety (WHMIS, First Aid & AED).
- Led and mentored junior SHSM students during technical labs and project activities, supporting safe equipment use, task coordination, and collaborative problem-solving.

B2 DELF Certification -French Language Proficiency Test

- Internationally recognized diploma demonstrating advanced French fluency, including independent speaking, structured writing, and comprehension in academic and professional contexts.

Varsity Men's Soccer

- Managed rigorous training schedule (30 hours/week), alongside academic responsibilities while maintaining a competitive GPA, while maintaining 100% attendance

EXPERIENCE

Camp Counsellor Summer 2025
Royal City Soccer Burlington, ON

- Supervised 20–30 campers daily, applying leadership skills, risk assessment, and teamwork to ensure safety and engagement, resulting in zero safety incidents.
- Led 5–8 structured drills per session for groups of 10–15 campers and enforced safety protocols, supported weekly program planning, contributing to smooth operations for 100+ campers.

Real Estate Assistant (Door-to-Door Sales) Summer 2023
Tristan Scott Real Estate Milton, ON

- Conducted 50–80 door-to-door interactions daily, demonstrating professional communication, adaptability, and resilience, generating multiple client leads weekly.
- Supported administrative and client communication tasks, maintaining accurate records and timely follow-ups in a fast-paced team environment.

Kitchen Hand June 2022 - Sept 2023
Cucci Risotrante Oakville, ON

- Supported kitchen operations serving 100+ customers per shift, maintaining clean and organized workstations under time pressure and in compliance with safety regulations, while working in a 5 to 10-person kitchen team.