

Danial Hassan Kazmi

Vancouver, BC | 778-680-1615 | danialhassan1998@gmail.com

EDUCATION

University of British Columbia

B.A.Sc. – Mechanical Engineering | GPA: 86/100

Vancouver, BC

Sept. 2025 – April 2030

PROJECTS

Custom RC Quadcopter

SolidWorks, 3D Printing, Mechanical Design, ESP32

July 2026 – Sept. 2026

- Designed and prototyped a custom quadcopter chassis from CAD models through 3D printing and physical assembly
- Iterated frame geometry and component placement to reduce weight while maintaining structural rigidity and propeller clearance
- Balanced motor, battery, and electronics placement to maintain center of mass and improve stability while troubleshooting mechanical and control-system issues
- Achieved controlled flight through iterative testing and PID tuning, adjusting control gains to reduce oscillation and improve flight stability

Motion-Activated Stair Lighting System

ESP32, Ultrasonic Sensors, Electronics

June 2026

- Designed and built a motion-activated 24 V LED staircase lighting system using ESP32 microcontrollers and ultrasonic sensors
- Integrated controllers at opposite ends of the staircase using wireless communication to coordinate motion detection and lighting
- Built and troubleshot MOSFET control circuitry and software for motion detection, automatic shutoff, sensor re-arming, and controller communication

Autonomous Retrieval Claw

Arduino, Sensors, Servo Actuation, Mechanisms

Jan. 2026

- Developed an autonomous claw system for detecting objects on the ground and picking them up.
- Integrated ultrasonic sensor input, Arduino control, and servo actuation to automatically open and close the claw for object pickup

VEX Robotics Team

Mechanical Design, Mechanisms, Iterative Prototyping

Feb. 2021 – June 2025

- Led the mechanical design and structural development of VEX V5 robots for team competitions
- Designed and built mechanisms for object collection, manipulation, and stacking through iterative prototyping
- Oversaw assembly, troubleshooting, and optimization of mechanical systems including gearing and structural components

EXPERIENCE

Host

White Spot

Sept. 2023 – Feb. 2024

Surrey, BC, Canada

- Greeted and seated customers while managing table rotation to support efficient service flow
- Managed reservations, table setup, and seating coordination during busy service periods
- Supported front-of-house operations through customer service, table resets, and dining-room organization

TECHNICAL SKILLS

Design/CAD: SolidWorks, Fusion 360, Onshape

Programming/Embedded: C, MATLAB, ESP32, Arduino, ESP-NOW, Sensors, PWM

Fabrication: FDM 3D Printing

Tools: Visual Studio Code, Xcode, Word, PowerPoint, Excel