

# Balkarn Gill

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## EDUCATION

### Master of Electrical & Computer Engineering (M.Eng) - Software Specialization

University of Calgary

- Organizations/Awards: GSA Academic Committee Vice Chair

Expected: May 2024

Calgary, Alberta

### Bachelor of Biomedical & Electrical Engineering (B.Eng)

University of Guelph

- Organizations/Awards: Dean's Honors List, Engineering Society, Robotics Team

Graduated: May 2022

Guelph, Ontario

## WORK EXPERIENCE

### Systems Analyst

Zedcor • (Part-time)

June 2023 – Present

Calgary, Alberta

- Conduct thorough analysis of business processes and identify areas for improvement, resulting in streamlined workflows and increased productivity.
- Configure and program sensors using PHP and MySQL to enhance security measures and ensure efficient monitoring of critical areas.
- Proactively monitor Genetec system performance, identify bottlenecks, and implement optimization strategies to enhance system reliability and performance.
- Increased system efficiency by ~5% in July 2023 by optimizing red zones, filters, and training object analytics models.

### Supply Chain and Operations Manager

Uline • (Permanent full-time)

October 2022 – April 2023

Milton, Ontario

- Led and managed a team of 30+ direct reports to optimize performance.
- Maintained a focus on meeting daily volume output targets while adhering to strict cut-off hours.
- Implemented monthly incentives to boost team morale and recognize high-performing employees, resulting in a notable decrease in the department's error rate from 0.021% to 0.017%.

### IT Consultant / Project Coordinator

ATF Transport • (Permanent full-time)

April 2022 – October 2022

Woodbridge, Ontario

- Contributed to the successful integration of new fleet management software by developing a customized solution that aligned with the company's unique requirements.
- Demonstrated exceptional troubleshooting skills by effectively identifying and resolving errors in the software and keeping the staff up to date with the latest functionalities and updates through regular briefings.

### Software Developer

Carnostic • (Internship)

September 2021 – April 2022

Toronto, Ontario

- Was responsible for defining, articulating, and executing the UX vision and strategy.
- Significantly contributed to the development of the user interface utilizing Sketch to visualize the design and React.js for implementation.
- Collaborated with key partners to continuously collect and review customer data and feedback for optimization opportunities and validation of user experiences.

## PROJECTS & LEADERSHIP EXPERIENCE

### Autonomous Plant Disease Detection Robot

Software & Circuitry Lead

January 2022 – April 2022

Guelph, Ontario

- Coordinated a team of interdisciplinary engineers in building an automated "Pathfinder" which was programmed to weave through rows of plants on its own, avoiding obstacles and detecting signs of disease in plants.
- Temperature sensor, humidity sensor, and ultrasonic distance sensor were wired and programmed using Arduino, a hyperspectral camera was also wired into the design and programmed using C via a Raspberry Pi, and important data points were transmitted using a Wi-Fi module.
- Won 1<sup>st</sup> place in the W22 innovative engineering design competition at the university.

### Brachycephalic Breed CT-Scan Apparatus

Research and Development Lead

September 2021 – December 2021

Guelph, Ontario

- Chosen out of 60+ applicants to design product for Dr. Alex Zur Linden from the Ontario Veterinary College.
- Purpose of the project was to create an apparatus that reduces visibility obstructions during CT-Scans for Brachycephalic dog breeds
- SolidWorks and ANSYS were utilized to create a fully working model that met all constraints/criteria of the client.

## SKILLS

**Languages/Frameworks:** Python, Java, JavaScript, MATLAB, C++, TypeScript, React, Pandas, NumPy, Tailwind, Git

**Technologies:** SolidWorks, AutoCAD, CircuitLab, ANSYS, Revit, ORACLE, Primavera P6, MS Office, Visual 3D