

# Balkarn Gill

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[portfolio](#) | [linkedin](#) | [github](#)

## EDUCATION

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

Expected: May 2024

University of Calgary | GSA Academic Vice Chair | 4.0 GPA

Calgary, AB

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

Graduated: May 2022

University of Guelph | Dean's Honour List | Robotic's Team | Engineering Society

Guelph, ON

## SKILLS

**Programming Languages** Python | Java | JavaScript | HTML | CSS | C | C++ | PHP | MATLAB | Simulink

**Technologies** MySQL | Node.js | AutoCAD | SolidWorks | ANSYS | Sharepoint | CircuitLab

**Data Science & Frameworks** Pandas | NumPy | MatPlot-Lib | React.js | Tailwind CSS | Angular | Django

## EXPERIENCE

### Back-end Developer

Jan 2023 - Present

CircleCVI | (Internship)

Calgary, AB

- Engineering robust **MySQL Stored Functions/Procedures** to ensure database integrity and consistency, vital for maintaining reliable **DICOM data**.
- Utilizing **Python for scripting and automation**, streamlining back-end processes and improving overall **data management workflow**.
- Playing a key role in improving the in-house tool for **managing DICOM data**, significantly boosting **data access efficiency** and meeting diverse development and testing needs.

### Systems Analyst

Jun 2023 - Dec 2023

Zedcor | (Part-Time)

Calgary, AB

- Proactively monitor **Genetec system performance**, identify bottlenecks, and implement optimization strategies to enhance system reliability and performance.
- Configure and **program sensors using PHP and MySQL** to enhance security measures and ensure efficient monitoring of critical areas.
- **Increased system efficiency by ~5%** by optimizing red zones, filters, and **training object analytic models**.

### IT Consultant

Apr 2022 - Apr 2023

ATF Transport | (Permanent Full Time)

Woodbridge, ON

- 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

Sep 2021 - Apr 2022

Carnostic Inc. | (Internship)

Toronto, ON

- Assisted the team to build **front-end and back-end** product features from start to finish: through conception, research, implementation, and maintenance.
- Contributed to the development of the **Android user interface** utilizing **Sketch to visualize** the design and **Java for implementation**.

## NOTABLE PROJECTS

### Neo Financial's "Tech Thursdays" Web Application

Aug 2023 - Dec 2023

Full Stack Developer

Calgary, AB

- Contributed to the development of an event-specific website for Neo Financial's tech events in Calgary & Winnipeg, working closely with the Marketing Director. Utilized **React for front-end** and **Drupal for back-end** to boost user engagement and visibility.
- **Collaborated with a development team** to implement features including user auth, event and speaker management, registration/ticketing, sponsor partnerships, and email communications.
- Culminated in a successful **transfer of ownership** and earned a **letter of recommendation from the company**.

### Autonomous Plant Disease Detection Robot

Jan 2022 - Apr 2022

Software & Circuitry Lead

Guelph, ON

- Led the development of an autonomous "Pathfinder" robot capable of navigating through plant rows, avoiding obstacles, and identifying plant diseases, utilizing **Arduino for sensor integration** and **Raspberry Pi for hyper-spectral camera programming**.
- Engineered the system with **temperature, humidity, and ultrasonic distance sensors**, alongside Wi-Fi data **transmission capabilities**.
- Secured **1st place** in the university's W22 innovative engineering design competition.