

# AARYAN DHAND

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## Education

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### University of Calgary

Sep. 2022 – Present

*Bachelor of Science in Software Engineering; GPA:3.37*

*Calgary, Alberta*

- **Awards:** Suncor Energy Dependant Scholarship 2022-2024, Jason Lang Scholarship 2023
- **Competition:** CUSEC 2024, CCPC 2024, NatHacks 2023, Hack the Change 2024

## Technical Skills

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**Languages:** Python, Java, C, C++, C#, HTML/CSS, JavaScript, SQL, Swift

**Frameworks and Tools:** Linux, GitHub, React, Flutter, Figma, Firebase, Git, Fusion360, PrusaSlicer, Agile

**Concepts:** Data Structures & Algorithms, Object-Oriented Programming, Full Stack Web Development, Computer Architecture, Operating Systems, Networked Systems, Embedded Systems

**Soft Skills:** Leadership, Teamwork, Problem-Solving, Adaptability, Time Management

## Experience

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### TechStart UCalgary

October 2024 – Present

*Software Developer*

*Calgary, AB*

- Developing, testing, and integrating physics into a platformer game using Unity and C# scripting.
- Utilizing data structures and algorithms within C# to create engaging in-game puzzles, contributing to player interaction and game progression.
- Leading the development of an object-oriented, modularized item creation system, optimizing time efficiency by 90%.
- Collaborating in an Agile environment with weekly sprints, including Jira integration for project tracking and task management.

### Bird Construction

May 2024 – August 2024

*Business Systems Architecture Student*

*Calgary, AB*

- Worked with Digital Services in the Business Systems Architecture team on delivery of business processes, requirements analysis, design solutions, and the software development life cycle through LeanIX and BIC.
- Collaborated across teams to ensure that business objectives were met in an efficient, secure, and scalable manner.

### Alberta Collegiate Robotics

(part-time) August 2023 – February 2024

*Software Developer*

*Calgary, AB*

- Worked to integrate hand movement tracking with OpenCV and Python, achieving 90% accuracy rate.
- Used Arduino to move servos on the open source InMoov 'bionic arm', using tracked gesture data.

## Projects

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### Sorting Algorithm Visualizer | *Python, Pygame, Data Structures & Algorithms, OOP*

- Utilized the Pygame library within Python to create a visualizer for various sorting algorithms.
- Written in the style of Object Oriented Programming, utilizing classes to instantiate and manage the application.

### Java Disaster Relief System | *Java, SQL*

- Built a Java application to manage the data of disaster victims through the use of a custom SQL database.
- Used SQL queries to dynamically update the database and display changes in the terminal.

### DriveAwake | *React, C, Python, Flask, Arduino*

- Developed a React web application to track EOG signals of drivers to prevent road incidents .
- Utilized C and Python machine learning models to save and predict user data that is managed in Flask .

### Arduino-controlled Retro Game Console | *Arduino, C++, Fusion360, PrusaSlicer*

- Utilized Arduino UNO processor as framework to build a retro video game console in a collaborative group setting .
- Used C++ and Arduino IDE to plan, test, and build a recreation of the classic game 'PONG'.
- Console parts designed in Fusion360, sliced and printed using PrusaSlicer .

### Arduino-controlled Automated Garden | *Arduino, C++, Fusion360, PrusaSlicer*

- Planned, designed, tested, and built an Arduino based automated garden with day-night cycle and automated watering in an ethical and cost effective manner .
- Increased efficiency by 10% on specific timed code with C++ that sent signals to the lightstrip on when to turn on or off, effectively creating a day and night cycle .
- Designed parts in Fusion360, sliced and printed using PrusaSlicer .