

# Manraj Singh

[manraj.singh@ucalgary.ca](mailto:manraj.singh@ucalgary.ca)

+1 403 923 3351

<https://manrajsingh6.github.io/>

## EDUCATION

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**University of Calgary, Calgary, Alberta**

*(2020 – Present) (3.22 GPA)*

B.Sc. in Software Engineering (3<sup>rd</sup> Year)

**Relevant Courses:** Data Structures and Algorithms, Computer Organization and Architecture, Principles of Software Development, Programming Fundamentals, Probability/Statistics and Machine Learning, Differential Equations, Linear Algebra, Discrete Math

**W.H. Croxford High School, Airdrie, Alberta**

*(2017 – 2020) (3.80 GPA)*

Alberta High School Diploma

## SKILLS

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Programming Skills:

- Python, Java, JavaScript, HTML, CSS, C, C++, MySQL, JUnit, Assembly (MIPS)
- Unix command line, Assembly (MIPS), Git

Other:

- Microsoft Office, Fusion 360, Adobe Photoshop, Adobe Premiere Pro, MATLAB, WordPress, Visual Studio Code, IntelliJ

## PROJECTS AND EXPERIENCE

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### Food Bank Order Management System | Developer

**Description:** Developed an application that allows users to input their family size and generate a food hamper that meets their nutritional needs for one week. Created a custom algorithm (97% efficient) that determines types of food and quantity of food to add in the hamper to meet the requirements yet remain efficient, and further generate an order form.

**Used:** Java, Swift, AWT, MySQL

Project link: <https://github.com/ManrajSingh6/Food-Bank-Order-System>

## **Machine Learning Vehicle Prediction Model (KNN) | Developer**

**Description:** Developed a K-nearest-neighbor machine learning model to predict types of vehicles when horsepower, weight, acceleration, and speed input was provided. Gathered vehicle data and stored the data into an Excel spreadsheet, then preprocessed the data and experimented with different parameters to produce a KNN model with a prediction accuracy of 94.6%; Generated various plots to analyze data and further investigated model accuracy using confusion matrices.

**Used:** Python, Jupyter Notebook, NumPy, Matplotlib, Pandas, Scikit-learn

Project link: <https://github.com/ManrajSingh6/Machine-Learning-Prediction-Model-KNN->

## **Introduction to Java – An Educational App | Developer**

*(March 2022)*

*Hack Your Learning Hackathon 2022*

**Description:** Created a desktop application that allows users to learn about the Java programming language through a series of lessons. To maintain user-interest and promote effective learning methods, each lesson contained embedded video tutorials and quizzes to test their understanding of the material.

**Used:** Java, Swing, AWT

Project link: <https://github.com/ManrajSingh6/HYLHackathon2022>

## **Freelance Website Development/Graphic Design**

*(2021 – Present)*

**Description:** Providing freelance website development and graphic design services to small businesses, allowing them to streamline their sales process and generate more clientele.

**Used:** WordPress, HTML, CSS, JavaScript

Relevant Work: <https://littlecanadadaycare.ca/>

## **AWARDS AND ACHIEVEMENTS**

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- University of Calgary Entrance Scholarship
- Alexander Rutherford Academic Achievement Scholarship
- Jason Lang Academic Achievement Scholarship

## **VOLUNTEER WORK AND LEADERSHIP ACTIVITIES**

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### **Community Sikh Temple Volunteer**

*(2017 – Present)*

Dashmesh Cultural Centre, Calgary

- Preparing and cooking large amounts of food after sessions of prayer
- Serving food
- Delegating organizational tasks to younger members of the team

**Highschool Leadership Club**

*(2017 – 2018)*

W.H. Croxford Highschool, Airdrie

- Teaching younger students about management and preparation practices for school events
- Organizing High School events (assemblies, rallies, fundraisers etc.)
- Assisting teachers with organizational tasks

References available upon request.