

# KARAN SAHNI

87 Maddybeth Crescent, Brampton, ON · 647-631-4512

[karan-1999@hotmail.com](mailto:karan-1999@hotmail.com)

Computer Science student with the traits of a lifelong learner. I want to expand my knowledge further from just software and also look at how software can enhance hardware in various applications.

A website representation of this resume with some of my other programming projects (with source code) can be found at <http://ugweb.cas.mcmaster.ca/~sahnik/> . GitHub Link:

<https://github.com/sahnik1/Projects>

## VOLUNTEERING

SEPT 2016 – JUNE 2017

**MATH CLUB**, MISSISSAUGA SECONDARY SCHOOL

- Club's purpose is to solve and work on various math related problems in preparation for several different Math Contests
- Came in Third in whole school in the University of Waterloo Euclid Math Contest

NOV 2017 – MARCH 2018

**EXECUTIVE**, GLOBAL ENGINEERING CONFERENCE

- Executive on the Promotions team for the Global Engineering Conference that took place on March 10, 2018.
- Main role was to create and maintain the website for the conference: [www.gec2018.com](http://www.gec2018.com)  
Other roles included making promotional material such as banners, posters and logos
- This conference is run by Engineers Without Borders at McMaster University to help show the creative side of engineering via various workshops hosted by experts
- Engineers Without Borders is a Canadian Charity consisting of more than 50,000 members which strive to use technology as a means of making people's live better and diminish poverty.

## TECHNICAL SKILLS

- Programming in Python with Basic SQLITE Database Skills
- Programming in C
- Programming in Java
- Experience with Git (GitHub)
- Programming in JAVA and C++
- Assembly Programming in x86-NASM
- Assembly Programming in MIPS
- Programming in Haskell (Functional Language)
- Programming in Elm (Functional Language to Generate JavaScript/HTML)
- UNIX/BASH Shell Scripting (Mac/Linux)
- Proficient in Microsoft Office programs, including Word, Excel, Outlook, and PowerPoint
- Basic Photoshop skills

## SKILLS AND INTERESTS

- Strong problem-solving skills & very resourceful
- Strong Communication skills
- Fluent in English/Punjabi/Hindi
- Extensive experience with interpersonal communication skills with people from diverse backgrounds
- Able to handle confidential information
- Strong time management skills and ability to coordinate many scheduled activities
- Able to work with minimal supervision and prioritize work according to requirements
- Good customer service skills
- Fast learner with a drive to learn new concepts/skills

## PROJECTS

### CARSEARCH, JAVA AND SCRUM

- Parsed, Analyzed, Reorganized 250,000+ rows of data
- Implemented an Application which provides detailed information on a requested model including Safety Rating (Web API Used), Recall Information, Fuel Economy, and other relevant Data. Data also scraped from JSON Values from a Web API using Python.
- Front End in Development, goal is to Search for a Car from a user provided picture.

### PROJECT ANALYZE, BASH SCRIPTING

- Completed the project successfully with the addition of 3 unique features.
- These included a function that tells the user the company of their processor, a function that helps copy files in an intuitive way, and a function that helps zip up to 2 files with a user given name for the archive.
- The link to the source code can be found on my website/GitHub stated above.

### WEBAPP PROJECT, ELM FRONT END

- Created my personal website.
- Made a webapp using Elm.
- Used Elm to make Where's Waldo Game that also keeps score and makes Waldo harder to see with each successful find.
- The game also has features including size reduction with each successful find and a lives system where the Player gets 3 lives.
- Other characters also included with same set of functions applied.
- The game and its source code can be found on my website/GitHub stated above.

### CUSTOM MATH LIBRARY, HASKELL

- Made a Math Library in Haskell for 1<sup>st</sup> Year University Calculus.
- The library is complete with Parsers, Partial Differentiation, Evaluation of Functions, Simplification of Functions and even Calculating Gradient Vectors for 2 Variable Functions.
- The Library also has different Parsers/Differentiation functions for Double, Float and Integer types.

- The library source code and complete documentation can be found on my website/GitHub stated above.

## EDUCATION

SEPT 2013 – JUNE 2017

**HIGH SCHOOL DIPLOMA**, MISSISSAUGA SECONDARY SCHOOL

- Graduated with Honor Rolls
- Grade 12 Average of 94%

SEPT 2017 - PRESENT

**BACHELOR'S IN COMPUTER SCIENCE CO-OP**, MCMASTER UNIVERSITY

- Bachelor of Applied Science in Computer Science with Co-op
- Competitive program with 50 students per year
- McMaster Entrance Honor Award, Level 3

## ACTIVITIES

As an individual I absolutely love to explore new topics in the world of computing. Among these, I would especially like to explore the knowledge of using Arduinos (microcontrollers) and Raspberry Pi's to create simple mechanical devices that use software.