




MIAN RAFAY

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PROFESSIONAL SUMMARY

A **creative, divergent** thinking **Software Engineer intern** with extensive expertise within **different** coding **languages**. Proceeding to my **seventh year** of passionate, robust coding involving the **creation** of **high-quality programs**. Holding the potent ability to effectively deliver and assist valuable solutions and developments to a hiring company. Prepared to **think outside** the **box** and strengthen the software community by **quickly** catching on and **adapting** to **new forms** of **intelligence** and the **latest technologies**. Demonstrated experience and interest by developing my **personal website** and many personal/collaborative projects. Currently pursuing an **Honors Computer Science** degree at **McMaster University**.

SKILLS

PROGRAMMING LANGUAGES: **Python, C#, C, C++, Java, JavaScript, Visual Basic (GUI), HTML, CSS, SQL, PowerShell**

TECHNOLOGIES: **Microsoft Applications, Visual Studio, Visual Studio Code, PyCharm, IntelliJ, Multimedia Logic React.js, AutoCAD, Arduino, Windows, MobaXterm**

SOFT SKILLS: **Critical Thinker, Problem Solver, Attentive Learner, Collaborative, Expeditious, Detail Oriented**

EDUCATION

BASc, HONOURS COMPUTER SCIENCE (CO-OP) | SEPT 2021 – PRESENT

MCMASTER UNIVERSITY

Deans' Honour List

GPA: 3.87

ONTARIO SECONDARY SCHOOL DIPLOMA (OSSD) | 2021

SATEC @ WA PORTER CI

Ontario Scholar

WEB DEVELOPMENT BOOTCAMP | 2020

UDEMY

EXTRACURRICULAR

HACK THE NORTH CONTESTANT {PASSWORD ENCRYPTER DATABASE} | 2021

Designed and **presented** a custom-made **password encryption program** done using **C++** which stores encrypted passwords on an **SQL database**.

ONTARIO TECH UNIVERSITY ROBOTICS COMPETITION FINALIST | 2019

Designed and **programmed** an **NXT** robot which qualified for the school team and competed at the **Ontario Tech University** for the robotics **competition**. Through **teamwork** and **hard work**, our team achieved a position in the **finals**.

SCARBOROUGH MATH OLYMPICS CONTESTANT | 2017

Selected male **representative** from the school to participate in the **Math Olympics** after **achieving** the **highest grade** on the **Waterloo Math Contest**.

ED APP HACK | 2016

Built a **prototype** of a **phone app** related to health and showcased it to **judges** at the event.

PROJECTS

FUNCTIONS INTERSECTION CALCULATOR | PYTHON

Given two [functions](#) by the [user](#) as [input](#), this program [calculates](#) the [intersection](#) point of the [two functions](#) within a certain interval using algebraic laws.

USER PASSWORD AUTHENTICATOR | C#

[Checks](#) password [syntax](#) of [user](#) input to [authenticate](#) the [password](#) while [storing](#) all previous [passwords](#) on a [file](#).

CONNECT 4 [HUMAN + AI PLAYERS] | JAVA

Implementation of a [connect 4 game](#) which can be played with [2 AI players](#), [2 human players](#) or [1 human and 1 AI player](#).

MATRIX CALCULATOR | C++

Computes [addition](#), [subtraction](#), and [multiplication](#) with [different order matrices](#) specified by the user. Uses [2d arrays](#) and different algorithms to go about each operation.

MEMORY GAME | C#

[Randomly generates](#) cards with letters faced down and you must [match](#) all [pairs](#).

PERSONAL WEBSITE | HTML, CSS, JS

Personal website [designed](#) with [eye catching](#) framework including all things in one's portfolio to show to a company's hiring manager. Showcases all my [personal projects](#), [skills](#), and [objectives](#).

EXPERIENCE

HOME-BASED TUTOR | 2019 – PRESENT

[Tutoring](#) students from grades 8 - 12 in [mathematics](#) and [computer science](#).

Languages: [Python](#) and [C/C++](#).

Mathematics: [Calculus and Vectors](#), [Linear Algebra](#), and [Advanced Functions](#)

ELECTIONS CANADA INFORMATION OFFICER | 2021

[Directed](#) individuals to the voting [sites](#) and [answered all questions](#) regarding elections.

RELEVANT COURSES

DATASCI 2G03

Performed [hands-on scientific programming](#) using [C/C++](#) under [Linux/Unix/Windows](#). Implemented [algorithms](#), [numerical methods](#), [program development](#) and programming in a [modern high-level language](#).

COMPSCI 2C03

Implemented [Data Structures](#) and [Algorithms](#) using [Java](#). Made projects/assignments using [stacks](#), [queues](#), [hash tables](#), and [binary trees](#). [Searching](#) and [Sorting](#); [Mergesort](#), [Heapsort](#), [Quicksort](#), [Shellsort](#), [Time Complexity](#), [Minimum spanning trees](#), [traversals](#), [shortest paths](#).

COMPSCI 2ME3

Completed individual and [collaborative](#) assessments with [teams](#) of [4-5 individuals](#) in a [timely manner](#). Worked with [Classes](#) and [inheritance](#), [class invariants](#), interface specifications; [object-oriented design patterns](#); [exception handling](#); tools for [interface documentation](#), [testing](#), program [analysis](#); requirements documentation; quality attributes; [development models](#).

COMPSCI 1JC3

Experimented with [functional programming](#) language, [Haskell](#). Used [recursion](#), [pattern matching](#) and worked with [custom data types](#). Developed [critical thinking](#) skills through a wide range of [complex logic](#) problems.

COMPSCI 1MD3

Worked with [object-oriented](#) programming concepts in [Python](#). Familiarity with [SQL](#) databases, [YAML](#) files, and [JSON](#) files. Developed [problem solving](#) skills through series of problem questions involving [algorithms](#).