

Mian Rafay

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[LinkedIn](#)



[GitHub](#)



[Website](#)

Professional Summary

- ◆ Demonstrated experience in web development by developing a full stack website using basic web technologies.
- ◆ Expressed passion and experience in object-oriented programming through personal projects in various languages.
- ◆ Demonstrated SQL knowledge through databases courses, learning to create and modify databases.

Education

McMaster University | Hamilton, ON

Expected Graduation, May 2025

- ◆ BASc, Honours Computer Science (Co-op)
- ◆ Deans' Honour List

Scarborough Academy for Technological, Environmental and Computer Studies | Toronto, ON

2017- 2021

- ◆ Ontario Secondary School Diploma
- ◆ Ontario Scholar

Udemy| Remote

2020

- ◆ Web Development Bootcamp

Skills

Programming

- ◆ Python, C#, C, C++, Java, JavaScript, HTML, CSS, SQL

Software

- ◆ GitHub, Microsoft Applications, Visual Studio, PyCharm, IntelliJ, Multimedia Logic React.js, AutoCAD, Arduino, MobaXterm, Terminal

Experience

Home-Based tutor | Remote

2019 – 2022

- ◆ Assisted students from grades 8-12 in mathematics and computer science.
- ◆ Python, C, C#, C++, Calculus and Vectors, Linear Algebra, and Advanced Functions

Hack The North Contestant | Remote

2021

- ◆ Designed and presented a custom-made password encryption program done using C++
- ◆ Program Stores encrypted passwords on an SQL database.

Ontario Tech University | Oshawa, ON

2019

- ◆ Team leader of the robotics team representing the Scarborough Academy for Technological, Environmental and Computer Studies.
- ◆ Worked in groups of 4 to designed and program an NXT robot which qualified for the school team.
- ◆ Robotics Competition Finalist at the tournament held at the Ontario Tech University, competing against participants present from schools throughout Toronto.

Scarborough Association for Mathematics Education | Toronto, ON

2017

- ◆ Selected representative from the school to participate in the Scarborough Math Olympics Contest after achieving the highest grade throughout the school on the 2017 Waterloo Math Test.

Ed App Hack | Toronto, ON

2016

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

Projects

Personal website | HTML, CSS, JavaScript

- ◆ Personal website designed with eye catching framework including all things in one's portfolio to show to a company's hiring manager.
- ◆ Showcases all personal projects, skills, objectives and detailed animations for aesthetic purposes.

Connect 4 | Java

- ◆ Implementation of a connect 4 game which is played by 2 AI players, 2 human players or an AI vs a human player.
- ◆ AI coded with algorithms to decide the best possible move increasing chances of winning
- ◆ Uses of encapsulation, inheritance, and abstraction within relevant classes

Matrix Calculator | C++

- ◆ Computes addition, subtraction, and multiplication with different order matrices specified by the user.
- ◆ Uses 2d arrays and distinct algorithms taught in linear algebra courses to go about each operation.

User Password authenticator | C#

- ◆ Checks the password syntax of user input to authenticate the password in a professional manner.
- ◆ Stores all previous passwords given by user on a separate .txt file.

Functions Intersection calculator | Python

- ◆ Program calculates the intersection point of the two functions inputted by the user within a certain interval using algebraic laws.
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Relevant Courses

COMPSCI 2XC3 | Computer Science Practice and Experience

- ◆ Implementation of computational solutions to practical problems that combine algorithmic design and analysis with software design principles.
- ◆ Attended labs with groupmates to complete given tasks in a timely manner, working in simulated workplace environments.
- ◆ Tested programs to identify speed constraints, bugs and errors by reverse engineering existing code.
- ◆ Upgraded programs to work faster and more efficiently at minimal time complexities.

COMPSCI 2DB3 | databases

- ◆ Implemented databases, Data modelling, integrity constraints, principles, and design of relational databases.
- ◆ Formulated SQL databases through a university server given specific instructions.
- ◆ Gained an understanding of query processing, transactions, concurrency control, recovery, security, and data storage.

COMPSCI 2ME3 | Software Development

- ◆ Completed individual and collaborative assessments with teams of 4-5 individuals in a timely manner.
- ◆ Completed tasks involving 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 2C03 | Data Structures and Algorithms

- ◆ Implemented Data Structures and Algorithms using Java.
- ◆ Completed tasks using stacks, queues, hash tables, and binary trees.
- ◆ Worked with Mergesort, Heapsort, Quicksort, Shellsort, Time Complexity, Minimum spanning trees, traversals, shortest paths.

DATASCI 2g03 | Scientific Computing

- ◆ 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.