MIAN RAFAY

Hamilton, ON · 647-917-2936

rafaym1@mcmaster.ca linkedin.com/in/mianrafay github.com/MianR1 mianrafay.com

PROFESSIONAL SUMMARY

A creative, divergent thinking **Software Engineer intern** with extensive expertise within different coding languages. Proceeding to another year of passionate coding involving the creation of high-quality algorithmic 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 motivation, our team achieved a position in the finals.

SCARBOROUGH MATH OLYMPICS CONTESTANT | 2017
Selected 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

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.

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.

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

---

RELEVENT COURSES

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.

COMPSCI 2DB3 | DATABASES
Implemented databases, Data modelling, integrity constraints, principles and design of relational databases, relational algebra, SQL, query processing, transactions, concurrency control, recovery, security, and data storage.

COMPSCI 2C03 | DATA STRUCTURES AND ALGORITHMS
Implemented Data Structures and Algorithms using Java. Completed tasks using stacks, queues, hash tables, and binary trees. Searching and Sorting; Mergesort, Heapsort, Quicksort, Shellsort, Time Complexity, Minimum spanning trees, traversals, shortest paths.

COMPSCI 2XC3 | COMPUTER SCIENCE PRACTICE AND EXPERIENCE
Implementation of computational solutions to practical problems that combine algorithmic design and analysis with software design principles, through an experiential approach in simulated workplace environments.

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 2AC3 - AUTOMATA AND COMPUTABILITY
Finite state machines, regular languages, regular expressions, applications of regular languages, grammars, context-free languages, models of computation, computability, and decidability.