

MIKE GAO

Education

University of Waterloo

Candidate for Bachelor of Computer Science (BCS) Exp. 2027

Relevant Coursework: Algorithm Design, Data Abstraction, Object-Oriented Programming, Statistics

Sept. 2022 to Current

Wilfrid Laurier University

Candidate for Bachelor of Business Administration (BBA) Exp. 2027

Award: President's Gold Scholarship (\$5000)

Relevant Coursework: Accounting, Financial Management, Organizational Behavior

Sept. 2022 to Current

Summary of Qualifications

- Programming languages: Java, Python, JS, C, Racket, C++, C#, Linux Shell/Bash
- Frameworks/Libraries: NumPy, Node.js
- Web development: HTML, CSS
- DevOps: Git, Docker, Jenkins
- Excellent leadership and communication skills as demonstrated in instructor and volunteer positions
- A software development passion and a strong desire to grow in my programming experience

Projects

Blast Puzzle Game (Python, pygame)

June 2023 to Current

- Developing puzzle game "Blast" inspired by Activate Games minigame using Python and the pygame library
- Refactored codebase with a high regard of core OOP concepts to promote maintainability, reusability, and ease of troubleshooting
- Implemented creative graphics, animations, particle classes, and a randomized generation feature that generates grid-based solvable configurations of obstacles, considering various offset scenarios and contributing to functional game logic

Personal Website (HTML, CSS, JS)

July 2023 to Sept. 2023

- Self-taught HTML and CSS through building a personal website portfolio hosted on mikegao.ca with a sleek, professional, and interactive design
- Created dynamic website UI elements including a navigation bar, transitions, and animations. Implemented robust support for different screen sizes, and tabs
- Developed contact form using a specialized JS script to collect and direct messages to a Google Sheets file

Sorting Algorithm Visualizer (Java)

May 2022 to June 2022

- Expanded and refined understanding of various sorting algorithms (Quicksort, Heapsort, Mergesort, etc.) through developing a visual and auditory representation using object oriented programming in Java
- Used JPanel and JFrame in the Java Swing library to create an interactive and intuitive user interface and increase program customization

Recursive Terrain Generation (Java)

Jan. 2022 to Feb. 2022

- Exceeded high school recursion project expectations by generating terrain models of varying detail, irregularity, and perspectives using Java. Learned the concept of fractal landscapes through recursion and displaying coordinates using the Swing library
- Mathematically integrated the projection of 3D quadrilateral lattices onto a 2D plane through linear interpolation. Incorporated algebraic geometry to create functional equations for recursive algorithm.

Quizzing Discord Bot (node.js)

Nov. 2020 to Dec. 2020

- Proactively fostered youth learning and engagement through the COVID-19 pandemic by developing a chatbot for the OCAC Discord server
- Imported and organized a diverse range of quizzing question banks, leveraging file manipulation techniques to allow for seamless randomized question retrieval by the chatbot. Created custom commands to retrieve questions of different types and from specific chapters
- Programmed additional features from gacha-inspired draw commands to an economy system that tracks each user's virtual currency using file manipulation, all to provide interactive and gamified aspects to the user experience

Work Experience

Dragon House Restaurant

Packaging and Transportation Executive

Mar. 2020 to July 2020

- Worked alongside cooks and restaurant employees to ensure smooth operation and delivery to 50+ customers per shift
- Packaged and prepared food while catering towards each customer's specific needs or requests. Mastered the assembly and garnishing techniques for over 200 dishes, ensuring that the food presentation and delivery is adequate and precise

Contact

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Volunteer Experience

Ontario Mennonite Music Camp · Leader in Training Conrad Grebel University College

Aug. 2022 to
Sept. 2022

- Employed leadership and communication skills to apply musical talents for teaching and nurturing youth abilities
- Facilitated meetings with camp counselors and volunteers as well as organizing and designing interactive activities

Canfly Education Canada · Programming Instructor

Nov. 2021 to
Mar. 2022

- Educated youth of many ages (8-12) on programming concepts (conditionals, loops, variables, etc.) using Java and Eclipse IDE. Explained complex and abstract topics visually and in simplified terms.
- Invested significant time into lesson prep and provided one-on-one student assistance when required
- Organized course content and curriculum with Canfly management to enrich student learning experience and meet Canfly's educational goals

Awards

American Protégé · International Music Talent Competition Gold Medalist

2020

Duet Piano with Clarissa Chan

Royal Conservatory of Music · Helen Tough Murray Scholarship

2019

Royal Conservatory of Music · ARCT Gold Medal

2019

Highest mark in ARCT Piano Performer's Examination

Royal Conservatory of Music · Level 10 Piano Gold Medal

2017

Highest mark in Grade 10 Piano Performer's Examination