

Yuvraj Singh Sandhu

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TECHNICAL SKILLS

Languages: Java, Python, JavaScript, HTML, CSS, C, SQL, Haskell, Elm, Bash

Developer Tools: VS Code, Astro, Git, DBeaver, Vim

Work Experience

Teaching Assistant

Jan, 2024 – Apr, 2024

McMaster University

- Assisted in teaching course materials during live laboratory sections, delivering clear explanations, clarifying concepts and addressing student queries on various **Python** programming concepts.
- Collaborated with fellow TAs to assess student comprehension and address learning challenges effectively, ensuring good resources are provided for **1000+** students.
- Graded assignments and provided detailed feedback to students for improvement.

Programming Experience

CS 2C03 – Data Structures and Algorithms

Sept, 2022 – Dec, 2022

McMaster University

- Used basic data structure: **Stacks, Queues, Hash tables** and **Binary trees**.
- Acquired knowledge of different **searching** and **sorting algorithms**.

CS 2ME3 – Introduction to Software Development

Sept, 2022 – Dec, 2022

McMaster University

- Used different **object-oriented design patterns** and **design principles**.
- Programming in Java with classes, inheritance, exception handling, testing, program analysis

EDUCATION

McMaster University, Current: 3.784 GPA

Hamilton, ON

B.A.Sc. Computer Science Co-op, Minor in Math

Sept, 2021 – May, 2025

- Deans' Honor List
- Received Faculty of Engineering Achievement Award

PROJECTS

Personal Portfolio | Astro, JavaScript, HTML, CSS, SVG, GitHub Pages

Oct, 2023

- Developed a fully responsive personal portfolio website that visualizes my resume and contains my projects, contact information and an about me page.

Jungle Math | Elm

Jan, 2022 – Apr, 2022

- Developed an app which teaches students the concepts of Perimeter, Area, Angles.
- Developed an adventure game in the app which gives feedback to the students on the progress of their learning.

Among Us / Elm

Mar, 2022

- Created a single player among us like game using Elm.
- Implemented the clear leaves and swipe card task from Among us.

Connect-4 / Java

Oct, 2022

- Developed a game using **object-oriented** programming concepts using Java.
- Developed an **AI** that can play a winning move and even block a winning move if available
- Highlights the object-oriented principles of **encapsulation, inheritance** and **polymorphism**

Konnec 4 (Connect 4-like Game) / Python, YAML

Dec, 2021

- Developed a python program which lets to players play Connect 4 through the command line
- Used **classes** for the game pieces and board so that the user can make new objects themselves
- Used exception handling to ensure the program does not crash from wrong outputs