Haseeb Sarfraz

647-782-8508 | haseebk.sarfraz@mail.utoronto.ca | linkedin.com/in/haseeb-sarfraz-04536b345/

Education

University Of Toronto Sep. 2023 – Present
Bachelor of Science in Computer Science, Major in Statistics, Minor in Mathematics *Mississauga, ON*

Experience

Event Associate Dec. 2021 – Jun. 2023
MSA (Muslim Student Association), Jean Augustine SS *Brampton, ON*

- Oversaw budgeting and coordinated marketing campaigns for community events, resulting in an increase in student turnout and engagement

Club Member Sep. 2022 – Jun. 2023
JASS Computer Science Club, Jean Augustine SS *Brampton, ON*

- Coordinated weekly coding sessions by arranging rooms and ensuring necessary resources were readily available
- Provided guidance to junior students on fundamental C++ concepts, encouraging hands-on practice and exploration

Projects

Paper to Compiler | *Python, Tesseract OCR, OpenCV* Jan. 2025 – Present

- Conducting research on Optical Character Recognition (OCR) techniques to accurately convert handwritten code into machine-readable text
- Designing a backend that integrates a Python environment to automatically compile and run recognized code
- Planning to reduce manual transcription in universities worldwide by streamlining grading for TAs and supporting multiple programming languages

Microsoft Paint Replica | *Java, JavaFX, Ollama 3* Sep. 2024 – Dec. 2024

- Developed a replica of Microsoft Paint with shape drawing, layering, and color selection using JavaFX
- Integrated Ollama 3 to automatically generate or modify images based on predetermined logic (e.g., a red car with circular wheels at a specific position on the canvas)
- Applied various design patterns (MVC, Abstract Factory, Builder, Command) to keep the code modular, extensible, and easy to maintain
- Completed as part of the CSC207 course at the University of Toronto.

Sokoban in Assembly | *RISC-V, CPULator* Sep. 2024 – Dec. 2024

- Developed an interactive version of Sokoban entirely in RISC-V Assembly, running on the CPULator simulator
- Handled collision detection, box-pushing mechanics, and invalid-move scenarios through efficient memory management and system calls
- Designed a text-based interface for user input, incorporating live feedback (e.g., "Invalid Move" prompts) and a restart feature
- Wrote a comprehensive user guide to streamline setup, compilation, and troubleshooting
- Completed as part of the CSC258 course at the University of Toronto.

Technical Skills

Languages: Java, Python, C++, Assembly
Libraries & Frameworks: JavaFX, Ollama 3, NumPy, Matplotlib
Developer Tools: Git, VS Code, Visual Studio, PyCharm, IntelliJ, LaTeX