

# FAISAL SHAIK



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## EDUCATION

### University of Toronto

Sep. 2022 – Present

Honours Bachelor of Science in Computer Science, Physics, and Mathematics. GPA: 3.61/4.0  
Part of the PEY co-op program.

### Awards

- **Dean's List Scholar (2023):** Cumulative GPA of 3.50 or higher after completion of a year.
- **University of Toronto Scholar's Award:** Merit based award for being one of the most outstanding students to apply.

## EXPERIENCE

### TeraGo Networks

Jan. 2021 – Sep. 2023

Network Technician

Brampton, Ontario

- Troubleshooted client IP connectivity issues as part of a team, fixing **70%** of problems before expected time.
- Installed, upgraded, and troubleshooted CISCO switches, routers, PDUs, and general ethernet and fiber optic connections.

## PROJECTS

**NoteNinja** | *Java, Gradle, JSwing, JUnit, Glot.io, GPT-3, Mockito, GlassFish, Clean Architecture, OOP*

- **Led a team of 4** in developing a note-taking app tailored for computer science students as the **head coder**.
- Created the **entire front end** for the text editor, providing seamless note searching using JSwing.
- Implemented a **code snippet** entering system where users may type in and run Python code using the Glot API.
- Streamlined real time AI assistance by integrating **GPT-3** into the text editor, providing quick access for users.
- Created **most of the back end** for the application and contributed to the data persistence layer.

**Insane Pong** | *JavaScript, HTML, CSS, Canvas, Touch Events, OOP*

- Developed an advanced pong game with single and multiplayer modes using **Canvas**, handling both **frontend** and **backend**.
- Designed and implemented advanced features such as **selectable difficulty** levels and **slider boosts** through dashing.
- Implemented a flexible **control system** with customizable key binds, mouse drag, and on-screen buttons.
- Created an engaging user interface with several interactive views focusing on **user experience**.
- Optimized the game for **mobile devices** using the **Touch Events API**, highlighting consideration for diverse user platforms.

**Rokoban** | *RISC-V 32, Ripes, Assembly, Linked Lists Data Structure, OOP*

- Developed a RISC-V 32-based Sokoban implementation with an LED matrix and DPAD controls via Ripes.
- Implemented linked lists in RV-32 for **dynamic memory allocation** and **O(n) sorting** for a multiplayer ranking system.

**Huffman Tree File Compress** | *Python, Pytest, Heap Data Structure, OOP*

- Implemented a file compression and decompression system using the **Huffman Tree algorithm**.
- The algorithm enhanced data storage efficiency by **50%**, facilitating seamless file transfers.
- Used **heaps** to increase efficiency of file compression speed by **5800%**.

**Treemap Visualizer** | *Python, Pytest, Pygame, Tree Data Structure, OOP*

- Created a Python program which displays a **hierarchical visualization** of system files and directories.
- Implemented a user-friendly interface with collapsible and expandable elements for easy folder navigation.

## TECHNICAL SKILLS

**Languages:** Python, Java, C, HTML/CSS, JavaScript, Shell Script, RISC-V 32

**Developer Tools:** Gradle, Maven, Git/GitHub, Ubuntu, VS Code, JetBrains IDEs, Ripes, PowerShell, cmd, Bash

**Technologies/Frameworks:** Node.js, PyLab, NumPy, Matplotlib

**APIs:** GPT 3, Glot.io, Touch Events, Canvas, Google Sheets

**Soft Skills:** Fluent in English, Urdu, Hindi, and some Punjabi. Hard working and excellent team cooperation skills.

## RELEVANT COURSES

CSC108 (Computer Programming), CSC148 (Computer Science), CSC207 (Software Engineering), CSC209 (Systems Programming), CSC236 (Theory of Computing), CSC258 (Computer Organization), CSC263 (Data Structures), MAT157/159 (Real Analysis), MAT235 (Multivariable Calculus), MAT240 (Algebra), STA256 (Statistics).