

# Vaibhav Lakshmi Santhanam

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## Education

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### University of Toronto – Honours Bachelor of Science

Computer Science Specialist in Software Engineering (Co-op), Minor in Economics *September 2021 - 2025*

*Awards:* University of Toronto Entrance Scholarship

## Technical Skills

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**Languages and Frameworks:** C, Python, Java, Javascript, CSS/HTML, SQL, Bash, Firebase

**Developer Tools:** VS Code, Git, GitHub, Jira, IntelliJ, Eclipse, Android Studio

**Courses and others:** Data structures and algorithms, Object Oriented Programming, Operating Systems, Agile (Scrum), GDB, Valgrind, SDLC

## Projects

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### Mybnb: Database Project (Java, SQL)

- Developed a platform inspired by Airbnb, serving users with rental options.
- Integrated a refined algorithm to suggest optimal pricing for new listings by analyzing existing listings with similar attributes, amenities, and locations.
- Collaborated in a team of two, driving the backend development and database management.

### Prep Well: Academic Planner App (JAVA, XML, Firebase Firestore)

- Conceptualized and executed a mobile solution for student academic planning.
- Adopted the MVP architecture and agile principles for iterative development.
- Collaborated in a team of five, managing app logic and data flow.

### Concurrent System Monitoring Tool (C, Unix Kernel)

- Devised a tool for reporting system metrics on Unix platforms, incorporating real-time CPU graphical representation.
- Promoted seamless inter-process communication using pipes for efficiency.
- Exclusive architecture in C, deeply integrated within the Unix kernel environment.

### Desktop Organiser Tool (Python)

- A Python tool to streamline and categorize files in target directories such as the desktop or downloads.
- Incorporated a 'dry run' mode for previewing changes and an intelligent check for pre-organized directories.
- Incorporated an intelligent check to determine if a directory is already organized, prompting users before any further action, enhancing usability.
- Implemented an effective Graphical User Interface.
- Integrated a detailed logging system for transparency and effective troubleshooting.

### Be Positive (MIPS assembly, MARS)

- Developed a 2D platform game using MIPS assembly language and the MARS software.
- Demonstrated ability to work with low-level languages.
- Implemented game features like gravity, moving platforms, and objects.