

Aryan Vekariya

Open to relocate | vekariyaaryan100@gmail.com | 204-619-8239 | [linkedin.com/in/aryan-vekariya](https://www.linkedin.com/in/aryan-vekariya) | aryan0826.github.io/portfolio

EDUCATION

Bachelor of Computer Science Honours, Minor in Mathematics

Sept 2023 - Expected Jan 2028

University of Manitoba

Winnipeg, MB

- **GPA:** 4.11/4.50 | **Dean's Honour List:** Winter 2025, Fall 2025 | **Academic Excellence Scholarship**

WORK EXPERIENCE

Undergraduate Research Assistant

May 2026 - Aug 2026

University of Manitoba - Advisor: Dr. Daniel Rea

Winnipeg, MB

- Investigated whether reusable motion macros and predefined move-sets could make robot teleoperation more expressive and practical in a four-month HCI and robotics project.
- Built and iterated teleoperation software prototypes, translating research questions into testable interaction designs through hands-on robotics setup and experimentation.
- Developed an ethics-aware qualitative-analysis design workshop to crowdsource community insights .

PROJECTS

StudyFlow - Android Academic Planner

Apr 2026

Java, Android SDK, SQLite, Mockito, GitLab

- Owned the business-logic layer for a five-person Android team across three iterations, implementing validation and event processing while integrating the UI with SQLite persistence through repository boundaries.
- Applied SOLID principles and layered architecture, using Mockito-based unit tests and integration testing to validate business rules and persistence interactions.

FAT32 Filesystem Reader

Feb 2026

C, FAT32, binary parsing, caching, gprof

- Developed a read-only filesystem utility that parses raw FAT32 disk images, traverses directory structures, and retrieves file data directly from cluster chains.
- Added defensive validation and caching for binary structures, then profiled execution with gprof to identify performance bottlenecks in filesystem traversal.

Oral Messages Byzantine Consensus Network

Nov 2025

Python, TCP/UDP, Unix sockets, select(), JSON

- Implemented the Oral Messages consensus protocol in Python across a dynamic peer-to-peer network, using UDP gossip for discovery and recursive OM rounds to test agreement under simulated Byzantine nodes.
- Added a 67% quorum, network-size-based OM depth, 30-second timeout recovery, and select()-based TCP/UDP multiplexing to tolerate unresponsive peers.

CyberSentinel - Bootcamp Winner: Best CyberSecurity Tool

Jun 2025

Python, Flask, Node.js, Express, JavaScript, VirusTotal API

- Built a Chrome extension with a companion dashboard that analyzes email and web links in near real time while preserving user privacy.
- Integrated VirusTotal threat intelligence and SSL-certificate signals into an explainable Safe/Risky workflow and delivered the winning project in a team of two.

EXTRACURRICULAR

Web Developer

Sept 2024 - Present

UManitoba Computer Science Students' Association (CSSA)

Winnipeg, MB

- Maintain the association's Next.js website with a team of 6 developers, using Jira issues and Git-based reviews to scope, track, and deliver updates.
- Contribute fixes and moderation features to the CSSA Discord bot used to manage the student association's server.

Software Developer

Sept 2025 - Aug 2026

UManitoba Space Applications and Technology Society (UMSATS)

Winnipeg, MB

- Resolved assigned issues across SOTI, a NUCLEO-L452 hardware-in-the-loop interface for CAN-bus testing and telemetry logging, and JARVIS, a React operations frontend.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, JavaScript, SQL

Frameworks & Technologies: React, Next.js, Node.js, Flask, Android SDK, REST APIs

Systems & Tools: Linux, Docker, ROS 2, Git/GitLab, Jira, TCP/UDP, Unix sockets

Databases & Testing: PostgreSQL, SQLite, Mockito, unit testing, integration testing