

# Connor Langan

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## EDUCATION

### University of Manitoba

*Bachelor of Science in Computer Science (Honours), Minor in Mathematics*

Winnipeg, MB

*Sep. 2023 – Present*

- GPA: **4.45 / 4.5** | Honours and entering Co-op program Winter 2025
- **Relevant Courses:** Data Structures and Algorithms, Object Orientation, Computer Systems

## WORK EXPERIENCE

### Supervisor/Lifeguard/Water Safety Instructor

June 2020 – August 2024

*Louise Recreation Commission*

*Pilot Mound, MB*

- **Led** pool operations, including scheduling, water quality maintenance, and staff training
- **Instructed** water safety and swimming skills to various skill levels, enhancing community safety

## VOLUNTEER EXPERIENCE

### Dev Club Hackathon — Mentor

2025

- **Provided** administrative support by enrolling 100+ competitors and managing event logistics
- **Guided** participants through technical challenges, fostering **innovation** and problem-solving skills

### Instructor/Lecturer — Dev Club Exam Cram

2024

- **Delivered** an engaging lecture on Analysis of Algorithms to 20 2nd-year students
- **Developed** comprehensive study materials, enhancing students' understanding of **complex concepts**

## PROJECTS

### FriendLocator: Geolocation Social App | *SQLite, Python, Flask, JavaScript* | [github.com/cjlangan/friend-locator](https://github.com/cjlangan/friend-locator)

- **Engineered** a self-hosted server with real-time location sharing and direction
- **Secured 2nd Place** in the Robobisons Competition for innovative application of geolocation technology

### HomeServer: Adblock & Data Storage | *Site Hosting, Remote, Headless*

- **Configured** a headless Home Server running 24/7, accessible remotely when using VPN
- **Initiated** network-wide adblock, family data storage & media share capabilities
- **Hosting** project websites such as [friend-locator.duckdns.org](https://friend-locator.duckdns.org)

### VoiceCompanion: Raspberry Pi AI Assistant | *Bash, Text-to-Speech, Speech-to-Text*

- **Engineered** an AI assistant for natural language processing
- **Implemented** text-to-speech and speech-to-text capabilities for seamless interaction
- **Optimized** performance for Raspberry Pi, achieving real-time responses without external APIs

### WebChess: AI Chess Game | *JavaScript, Object-Oriented Programming* | [github.com/cjlangan/web-chess](https://github.com/cjlangan/web-chess)

- **Developed** a fully functional chess game with an intuitive user interface
- **Implemented** complex game logic and move validation using object-oriented principles
- **Designing** an AI opponent using minimax algorithm with alpha-beta pruning

## AWARDS

- Highschool **Average of 98%**; Valedictorian
- Work Ethic & Community Volunteer Scholarship
- Governor General Academic Medal
- MHSAA Credit Union **Scholar-Athlete** Certificate
- Boundary Co-op Scholarship for Academic Standing
- Askew Memorial Scholarship; **Highest Academic Standing**

## TECHNICAL SKILLS

**Languages:** C, C++, SQL, Java, Rust, JavaScript, Python, R, Bash, HTML/CSS

**Tools & Technologies:** Git, Unix, Vim, Docker, LaTeX, Flask, React, Node.js, SQL

## ACTIVITIES & INTERESTS

**YouTuber:** Manage a channel with 6500+ subscribers and 2.6M+ views, featuring parameter modification hacking

**Linux Enthusiast:** Daily drive Arch Linux, constantly exploring and customizing advanced system configurations