

# Angus Sun

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## EDUCATION

### University of Waterloo

BSE Honours Software Engineering

Waterloo, ON

Sept. 2025 – Apr. 2030

*Relevant Coursework: Programming Principles, Introductions to Methods of Software Engineering, Introduction to Data Abstraction and Implementation, Calculus 1, Calculus 2, Linear Algebra*

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, MySQL, Postgres, JavaScript, Typescript, HTML/CSS, Tailwind CSS

**Frameworks:** React, Node.js, Next.js, Express, Vite

**Developer Tools:** Git, Docker, Vercel, Render, Prisma ORM, OAuth, MediaPipe, Supabase

## EXPERIENCES & PROJECTS

### Software Engineer Intern

Feb. 2025 – Aug. 2025

Falcon Technologies

Vancouver, BC

- Built a subscription tracker (**Next.js, MySQL, Prisma ORM**) supporting **10,000+** monthly transactions
- Implemented secure authentication (**OAuth + credentials**) and responsive UI with **Tailwind CSS**
- Developed **RESTful APIs** and containerized database with **Docker**, reducing deployment time by **60%**

### MatchA Dance

1st Place Overall — GoOn Hacks Hackathon (200 selected participants from 800 signups)

 /matcha-dance

 matcha-dance.vercel.app

- Built in 24 hours; AI-powered dance battle app scoring choreography with **MediaPipe** motion tracking
- Configured **Supabase** (Google OAuth, Row-Level Security) for user profiles and videos
- Developed stateless **Express + PostgreSQL** APIs and leaderboard; integrated with **React + Vite**
- Deployed via **Vercel** (Frontend) and **Render** (Backend); managed **CI/CD pipeline** for 4-person team

### Squat Showdown

Best AI Hack — Boost Hacks II Hackathon (1200+ participants)

 /squat-showdown

 squat-showdown.vercel.app

- Designed a custom model and state machine to detect squats in real time using **MediaPipe**
- Implemented **Express + WebSocket** backend to sync gameplay across browsers
- Devised pose-based rep counter and scoring logic for accurate AI evaluation

### Echoblock

Raspberry Pi Music Memory Game

 /EchoBlock

 echoblock-demo

- Implemented real-time pitch detection in Python using **autocorrelation** and **scikit-learn** classification
- Integrated **Raspberry Pi GPIO** with LED feedback via socket communication
- Built a **Python pipeline** for signal processing (**FFT, interpolation**) to map microphone input to notes
- Designed modular architecture for synchronized game logic, scoring, and visual feedback

### Skync

Real-time collaborative whiteboard

 /skync

 skync-frontend.vercel.app

- Programmed a multi-user whiteboard with real-time drawing, image, and text collaboration via WebSockets
- Built a **Socket.IO** backend to synchronize user actions across clients in real-time
- Designed a modular UI with dynamic toolbars and color pickers using **React hooks** and CSS modules

### Nanopeas Website

Custom e-commerce site for non-profit

 nanopeas.vercel.app

- Built a full-stack e-commerce platform for Vancouver nonprofit with responsive UI architecture
- Integrated **PayPal API** with automated fee computation and transactional order-processing backend
- Implemented client-side shopping cart with **localStorage** persistence and real-time inventory control