

PAL TILVA

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Education

Simon Fraser University

Bachelor of Science in Computer Science (GPA: 3.55)

May 2027(expected)

Burnaby, BC

Experience

Prototyp3

Sept 2025 – Present

Software Developer(Remote)

Ottawa, ON

- Designed a modular web platform with **React**, **TypeScript**, and **Tailwind CSS** boosting development speed by **30%**.
- Engineered secure auth and real-time data syncing via **Supabase**, supporting **50+ user profiles**.
- Deployed on **Vercel** with automated **GitHub Actions** CI/CD, cutting release time by **40%**.
- Collaborated with a 5-member **Agile team** through code reviews and sprint planning to accelerate feature delivery.

SFU Robot Soccer

May 2025 – Present

Software Developer

Burnaby, BC

- Developed an **A* pathfinding** module in a **C++ microservice** for **6+ autonomous robots**, improving simulation performance by **20%**.
- Integrated **gRPC**-based client-server architecture, reducing AI-to-backend communication overhead by **25%**.
- Implemented **30+ unit tests** using **Boost.UT** and Python, increasing test reliability and code coverage.
- Drove **CI/CD adoption** with a 6-member Agile team using **Git** and **Docker** in a **Linux**-based development environment, reducing release defects by **30%**.

Projects

InterviewAI | *Next.js, React, Firebase, TailwindCSS, TypeScript, Playwright*

July 2025

- Applied **natural language processing (NLP)** with **Gemini API** to parse resumes and generate structured interview questions, simulating document parsing and test-case generation.
- Architected **multi-turn chat** using **Firebase Firestore (NoSQL)** and validated flows with **Playwright**, improving response quality by **30%**.
- Designed responsive UI using **TailwindCSS** and **ShadCN**, achieving **95+ Lighthouse scores**.
- Deployed on **Vercel** with **CI/CD**, ensuring fast performance and smooth iteration.

SkyFare | *Next.js, JavaScript, React, GitHub Actions, SDLC, Sentry, Netlify*

Jan 2025 – Apr 2025

- Developed a **flight search web app** enabling users to find flights, check statuses, and chat with a **Gemini-powered assistant**; delivered to **100+ active users** during showcase.
- Earned the **People's Choice Award**, selected as the top project among **20+ teams** for innovation and execution.
- Led a **4-member team** as **PM and core dev**, completing full **SDLC** with **100% sprint completion**.
- Integrated **Amadeus API** for real-time flight search and built a **Gemini-powered chatbot** using **NLP** to parse user queries into structured requests.
- Automated builds with **GitHub Actions**, cutting manual deployment time by **40%**.
- Implemented error tracking with **Sentry**, resolving **10+ runtime issues** before launch.

ReportVan | *Next.js, React, TypeScript, TailwindCSS, Zod, Leaflet.js*

Nov 2024 – Dec 2024

- Developed a **live incident mapping platform** with **Leaflet.js**, dynamically clustering **50+ real-time reports** and implementing zoom sync for intuitive navigation.
- Enhanced **form validation** with **Zod**, improving data accuracy by **30%** across **100+ user submissions**.
- Achieved **95+ Lighthouse score**, exceeding performance and accessibility benchmarks per PRD.

Technical Skills

Languages: Python, C++, C, Java, JavaScript, TypeScript, HTML, CSS, Rust, SQL

Frameworks/Libraries: React, Next.js, Node.js, TailwindCSS, Leaflet.js, Pygame, ShadCN

Developer Tools/Environment: Linux, Git, GitHub Actions, Figma, Docker, PyTest, Boost.UT, Zod, Playwright

Databases: MongoDB, PostgreSQL, MySQL, Firebase Firestore, Supabase

Leadership / Extracurricular

WiCS Mentor

Sept 2025 – Present

- Mentoring 3+ first-year CS students, improving academic outcomes and confidence through personalized support, study planning, and skill-building workshops.