

Pal Tilva

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EDUCATION

Simon Fraser University

Bachelor of Science in Computer Science

May 2027 (expected)

Burnaby, BC

EXPERIENCE

Software Developer | C++, Boost.UT, Git, Docker, gRPC

May 2025 – present

SFU Robot Soccer

- Developed an A* pathfinding module in a C++ microservice for 6+ autonomous robots, enabling real-time obstacle avoidance and improving simulation performance by 20%.
- Integrated gRPC-based client-server architecture for low-latency communication between AI modules and simulation backend, reducing overhead by 25%.
- Implemented 30+ unit and integration tests using Boost.UT, improving test coverage and reliability.
- Collaborated in Agile sprints with a 6-member team using Git, Docker, and code reviews, driving CI/CD adoption and ensuring modular, maintainable code.

VOLUNTEERING

WiCS Peer Mentor

Aug 2025 – present

SFU Women in Computing Science

- Mentored 5+ first-year CS students, improving academic outcomes and confidence through personalized support, study planning, and skill-building workshops.
- Co-led 3+ university events, boosting first-year engagement by 25% and advancing DEI in tech.

PROJECTS

InterviewAI | Next.js, React, Firebase, TailwindCSS, ShadCN, TypeScript

July 2025 – July 2025

- Engineered an AI-driven interview prep tool used by 30+ users, leveraging Gemini API to generate resume-specific questions.
- Architected multi-turn chat using Firebase Firestore (NoSQL), improving response quality by 30%.
- Built responsive UI using TailwindCSS and ShadCN, achieving 95+ Lighthouse scores.
- Deployed on Vercel with CI/CD, ensuring fast global performance and smooth iteration.

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

Jan 2025 – Apr 2025

- Voted People's Choice Winner among 20+ competing 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, enabling personalized, conversational assistance for users.
- 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 & accessibility benchmarks per PRD.

TECHNICAL SKILLS

Languages: C/C++, Python, Java, JavaScript (ES6), TypeScript, HTML, CSS, Rust, SQL

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

Developer Tools: Git, GitHub Actions, Figma, Docker, PyTest, Boost.UT, Zod

Databases: MongoDB, PostgreSQL, MySQL, Firebase Firestore