Pal Tilva

437-662-8706 | paltilva2005@gmail.com | linkedin.com/in/pal-tilva | github.com/prt2

EDUCATION

Simon Fraser University   **Dec 2026 (expected)**
Bachelor of Science in Computer Science   Burnaby, BC

EXPERIENCE

Software Developer | *C++, Python, Boost.UT, Docker, gRPC*   **May 2025 – present**
SFU Robot Soccer
- Implemented A* pathfinding algorithm in C++, enabling 6+ autonomous robots to dynamically avoid obstacles in simulation.
- Identified and resolved 15+ critical bugs in legacy path planning code, reducing system crashes during simulation by 30%.
- Created unit tests using Boost.UT, achieving 100% increase in code coverage.
- Collaborated in an Agile setting using Git for version control and Google Protobuffers (gRPC) for communication.

Calc Connect Peer Mentor   **Sept 2024 – Dec 2024**
Simon Fraser University
- Designed and led peer sessions for 40+ students, improving average test scores and retention.
- Customized tutoring content based on student feedback and professor insights.
- Provided mentorship and learning strategies that boosted session attendance and engagement.

PROJECTS

InterviewAI | *Next.js, Firebase, TailwindCSS, ShadCN, TypeScript, Playwright*   **July 2025 – July 2025**
- Built a web app that generates tailored interview questions using Gemini API by analyzing resumes and job descriptions.
- Integrated Firestore for real-time, multi-turn chat sessions, improving response coherence by 30%.
- Designed mobile-friendly UI with TailwindCSS and ShadCN, achieving 95+ Lighthouse scores.
- Added automated UI tests using Playwright to prevent regression bugs during iterations.
- 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 – April 2025**
- Earned People's Choice Award among 20+ teams for innovation and execution.
- Directed a 4-member team as Project Manager and core developer, overseeing documentation, Agile workflows, and stakeholder alignment.
- Integrated real-time flight search with Amadeus API and built Gemini chatbot for user support.
- Automated builds with GitHub Actions, cutting manual deployment time by 40%.
- Implemented monitoring with Sentry and maintained 95+ Lighthouse accessibility and performance.

ReportVan | *Next.js, React, TypeScript, TailwindCSS, Zod, Leaflet.js*   **Nov 2024 – Dec 2024**
- Engineered an interactive mapping interface using Leaflet.js to display live emergency reports with real-time clustering and zoom-level syncing.
- Applied robust form validation with Zod and integrated phone formatting to improve data accuracy and submission quality.
- Exceeded performance and accessibility benchmarks with a 95+ Lighthouse score and full alignment with PRD specifications.

TECHNICAL SKILLS

Languages: C/C++, Python, Java, JavaScript (ES6), TypeScript, HTML, CSS, Rust, Haskell, SQL
Frameworks/Libraries: React, Next.js, Node.js, TailwindCSS, Leaflet.js, Pygame, ShadCN
Developer Tools: Git, GitHub Actions, Figma, Docker, Firebase, PyTest, Boost.UT, Zod, Sentry, Playwright