

Stefan Zupancic

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

Summary

A polyglot software engineer who architects performant (end-to-end) systems from zero to one, with expertise spanning AI/ML automation pipelines, foundational web technologies, high fidelity data visualization, and holistic systems design.

Skills

- **Languages:** Rust, Python, Go, JavaScript/TypeScript, C, SQL, HTML/CSS
- **Backend & Databases:** ElysiaJS, Bun, Node.js, Go (templ), PostgreSQL, Docker
- **AI/ML:** PyTorch, OpenCV, Hugging Face Transformers, Tesseract, Scikit-learn
- **Frontend & Visualization:** Three.js, Browser Canvas API, WASM, HTML/CSS
- **DevOps & Tools:** Git, CI/CD, Docker, Linux, Shell Scripting
- **Techniques & Methodologies:** System Design, Data Pipeline Engineering, Computer Vision (OCR/VLM), CI/CD, Full-Stack Architecture, Performance Optimization, API Design, Agile, Scrum

Software Development Projects

OW2-Replaycode-OCR | Lead Developer & AI/ML Specialist | Remote

A sophisticated Discord bot that uses AI/ML to extract Overwatch 2 replay codes from screenshots.

- **Designed** and **deployed** a dual-pipeline computer vision system using **Python**, offering both a fast Tesseract OCR engine and a high-accuracy Vision Language Model (VLM) with **PyTorch** and **Transformers**.
- **Architected** a data feedback loop where user reactions log images and results to a PostgreSQL database, creating a curated dataset for future model fine-tuning.
- **Containerized** the entire application using **Docker**, including **GPU acceleration**, to ensure high-performance inference for a system serving over 150 communities, including professional esports teams.

PaleoMap3D | Lead Developer & Data Pipeline Architect | Remote

An interactive 3D geospatial web application that visualizes historical reconstructions of Earth's topography.

- **Engineered** a high-throughput data processing pipeline using **Rust** and **Python** to parse, transform, and compress massive NetCDF scientific datasets into a custom binary format or texture file optimized for web delivery.
- **Developed** a custom rendering engine with **Three.js** and a real-time binary data parser to visualize topographical data across 500+ million years of geological time.
- **Deployed** a high-performance backend using **Bun** and **ElysiaJS** to serve the application and stream geospatial data files on demand.

Pokepastefix & HQmons | Full-Stack Developer | Remote

Fixes missing Pokémon images on a popular community site via a cross-browser extension and custom image server.

- **Developed** and published a cross-browser extension (**800+ daily users**) that fixes and enhances a popular community website using dynamic resource insertion.
- **Built** a high-speed image server backend using **Bun** and **ElysiaJS** to handle over 10,000 monthly requests, demonstrating an efficient and tightly-coupled client-server architecture.

Deadlocker.tv | Full-Stack Developer & Founder | Remote

A feature-rich community hub for the game "Deadlock," featuring several complex, interactive tools.

- **Engineered** a feature-rich tactical map from scratch using the **Canvas API**, implementing real-time drawing, an advanced path-based eraser, icon manipulation, group selection, and touch/mouse controls.
- **Built** a type-safe backend in **Go** using **templ** for high-performance server-side rendering of markdown content.

Professional Experience

Freelance Programmer | BC Wildfire Services | Remote July 2025

- **Engineered** a data processing pipeline in **Python** and **OpenCV** to automate the synchronization of video footage with air quality monitoring data (PM4, CO), saving hundreds of hours of manual work for occupational hygienists.

AI Training Data Specialist | TELUS Digital & Outlier AI (Contract) | Remote March 2024 – July 2025

- **Authored** high-quality instruction-response datasets to fine-tune and improve the safety and accuracy of **LLMs**.
- **Designed** adversarial test cases to identify model blind spots, logical fallacies, and code generation errors, strengthening model robustness through Reinforcement Learning from Human Feedback (**RLHF**).

Esports Coach | Various Tier 2/3 Teams | Remote September 2019 – March 2024

- **Built** and managed a data analysis pipeline using custom scripts to automate the collection and analysis of in-game statistics, informing data-driven strategy and performance improvements.
- **Led** teams to multiple tournament victories through superior strategic preparation and opponent analysis.

Site Supervisor | Good2Grow | Toronto 2017 – Present

- **Led** a small team in executing full-scale garden restoration projects, coordinating directly with clients.

Education

University of Guelph, Bachelor of Computing, Computer Science – 2023