Stefan Zupancic

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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, JavaScript, Go, C, HTML, CSS, SQL
- **Technologies:** WebAssembly (WASM), Docker, PyTorch, OpenCV, PostgreSQL, Git, Node.js, Bun
- **Frameworks & Platforms:** Bevy, ElysiaJS, Three.js, templ, wasm-bindgen, Transformers, Tesseract
- **Techniques & Methodologies:** System Design, Data Pipeline Engineering, Computer Vision (OCR/VLM), CI/CD, Full-Stack Architecture, Performance Optimization, API Design, Agile, Scrum

Software Engineering Experience

ow2-replaycode-ocr | AI/ML Engineer | **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-based OCR engine and a high-accuracy Vision Language Model (VLM) with **PyTorch** and **Hugging Face Transformers**.
- **Architected** a data feedback loop where user reactions trigger the logging of images and results to a **PostgreSQL** database, creating a curated dataset for future model finetuning.
- **Containerized** the entire application using **Docker**, including full configuration for **GPU acceleration** to ensure high-performance inference for the VLM.

pokepastefix & hqmons | Full-Stack Engineer | **Remote**
A cross-browser extension and its dedicated, high-performance image server that fixes missing Pokémon images on a popular community site.
- **Developed and published** a browser extension with shared JavaScript logic for **Chrome, Firefox, and Safari**, demonstrating a strong understanding of cross-platform browser APIs.
- **Built** a high-speed, purpose-built image server backend using **Bun and ElysiaJS** to serve multiple image resolutions on-demand, creating an efficient and tightly-coupled client-server architecture.

paleomap3D | Data Visualization Engineer & Project Lead | **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, high-density binary format suitable for the web.
- **Developed** a custom rendering engine with **Three.js**, featuring a real-time parser for the binary data stream and a dynamic color-mapping system to accurately visualize topographical elevation across geological time periods.
- **Built** and deployed the backend server using **Bun** and ElysiaJS, optimized to serve the core application and stream the custom geospatial data files on demand to the client.

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 as a multi-layered **Canvas API** application, implementing real-time drawing, an advanced path-based eraser, icon manipulation, group selection, and zoom/pan controls.
- **Built** a modern, type-safe backend in **Go** using the templ library, creating a simple but effective content management system by serving pre-rendered Markdown for high performance.

Professional Experience

Freelance Programmer | BC Wildfire Services | **Remote** July 2025
- Engineered a data processing pipeline to save Occupational Hygieneists hundreds of hours of manual labour.
- Automated editing of video footage combined with PM4 and CO monitoring device data.
- Leveraged experience with **Python** and **OpenCV**.

AI Training Data Specialist | TELUS Digital & Outlier AI (Contract) | **Remote** March 2024 – July 2025
- Evaluated and provided expert feedback on AI model outputs across text and code modalities.
- Authored high-quality instruction-response datasets for fine-tuning and Reinforcement Learning from Human Feedback (RLHF).
- Designed creative, adversarial test cases to identify model blind spots, logical fallacies, and code generation errors, contributing directly to the data pool for major, industry-leading AI models.

Esports Coach | Various Tier 2/3 Teams | **Remote** September 2019 – March 2024
- Built a data analysis pipeline using Google Workspace and custom scripts to automate the collection and analysis of in-game statistics, identifying key performance indicators.
- Authored comprehensive technical guides and strategy documents, creating a centralized knowledge base that accelerated player onboarding and skill development for over 6 competitive teams.
- Led teams to multiple tournament victories through superior strategic preparation and data-driven opponent analysis.

Site Supervisor Gardening | Good2Grow | **Toronto** 2017 – Present
- Executed full scale garden restoration plans while leading a small team
- Worked directly with clients to realize their vision.
- Pruned various types of plants. Cut down branches and sawed down minor trees.
- Applying fabric to the ground to stop the spread of weeds.
- Digging holes and planting plants.
- Working with different types of stones to make paths.

Education

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