

## EXPERIENCE

### Independent Projects / Sabbatical

September 2025 - Present

- Built and shipped technical prototypes including an ePOS MVP and a multimodal RAG tool for querying YouTube videos and audio files, supporting content repurposing for Substack, Twitter, newsletters, and personal knowledge management

### Lead Software Engineer

Tensorplex Labs

February 2024 - August 2025

- Designed, architected, and solely developed [Dojo](#), the first AI flagship product of Tensorplex, from concept to production in 3 months including bootstrapping initial set of 250-1500+ users from an incentivized Layer 1 blockchain Bittensor, [gaining investment from Binance](#)
- Led business direction pivot from reward modelling to human-in-the-loop data labelling, which enabled strategic partnerships with companies like [404-Gen](#) for 3D image annotation
- Grew annual product revenue by 50% from \$2M USD to \$3M USD by leading a team of 8 engineers, delivering 83% cost savings and increasing service availability by 500%, achieving 1% of Bittensor network emissions (pre [Dynamic TAO](#))
- Drove exploration of [synthetic code generation](#) for interactive user interfaces, iteratively improving outputs for tasks using prompt engineering and various SOTA methods (chain-of-thought, [ReWOO](#)), automated code linting & fixing, and human feedback loop methods
- Designed [incentive mechanisms](#) which led to the completion of 3.2M crowdsourced labeling tasks, distilled into 25k supervised fine-tuning [SFT](#) and 12.5k direct preference optimization [DPO](#) datasets to release [Dojo-Interface-Coder-7B](#)
- Drove direction for [Kami](#), a language-agnostic solution leveraging Polkadot.js to address Bittensor developer pain points and simplify blockchain interactions, securing [endorsement from Bittensor founder](#) for enhancing ecosystem accessibility
- Maintained >90% product uptime by coordinating constantly with other stakeholders & network participants and using observability tools Grafana & Loki

### Founding Engineer

Tensorplex Labs

July 2023 - August 2025

- Built end-to-end RAG application Tensorplex Stream, a Bittensor ecosystem research platform, by scraping 40+ YouTube channels and transcribing 1,000+ videos
- Architected decentralized AI infrastructure, leveraging decentralized compute on Bittensor to serve queries with fallbacks to other LLM providers including API key load balancing for performance optimization
- Delivered L3 executive technical support across 50+ investor calls, which played a pivotal role to the company's [successful USD\\$3M seed funding round](#) led by Canonical Crypto and Collab+Currency
- Conducted comprehensive technical research by evaluating libraries, frameworks, and vector databases (Qdrant, Milvus, Chroma) using approximate nearest neighbor (ANN) benchmarks for optimal recall and query per second (QPS) performance, scaling project from proof-of-concept to production in 2 weeks
- Built Maiko.ai, an automated Discord support agent powered by LangChain, eliminating repetitive FAQ handling for community managers.
- Built frenscanner.ai, a Discord analytics tool to detect sentiment, trends, tokens mentioned and high-signal conversations across a web3 social network, friend.tech.
- Designed and developed real-time streaming architecture using Server-Sent Events (SSE) and Next.js, reducing time-to-first-token (TTFT) from 60 seconds to under 1 second
- Optimized retrieval accuracy through experimentation with multiple data chunking strategies (fixed length, sentence window, semantic) and embedding models (OpenAI, Together, Cohere) to enhance contextual relevance during retrieval
- Enhanced and implemented advanced query processing (decomposition, classification, reranking) to handle diverse user queries and prompt engineering techniques for database query optimization
- Re-architected order book aggregation engine from Python to Go and added support for Binance, MEXC, and Bybit, reducing latency from >1s to <1ms for real-time market execution strategies.

### Backend Software Engineer

OKX

June 2022 - July 2023

- Designed and developed RESTful APIs for a dashboard serving 120 users to analyse growth channels and automate business reporting while achieving 95% faster response times end-to-end
- Implemented integration of third-party CRM software with internal systems to automate affiliate deal pipelines and increase growth of affiliates by 500% YoY
- Led a team of 16 as scrum master for 6 sprints to successfully build new features and enhancements for users

- Maintained 85% test code coverage to reduce bugs and maximise microservice uptime
- Created technical and best practice documentation on Java, MyBatis, and Unit Testing, enabling current and future engineers to quickly onboard and deliver high-quality software.
- Mentored peers in Vim, Java, Git and Linux commands to enhance developer productivity

#### Autonomy Engineer

#### AI Drivers

December 2020 - May 2021

- Co-led a team of 5 to deliver the company's first computer vision product, achieving over 80% accuracy for an instance segmentation model to detect when workers wrongly use safety equipment in a warehouse environment (PyTorch, Python)
- Successfully automated configuration of development environments to speed up engineers onboarding (Ansible, Bash)
- Containerized production environment to improve reliability and reduce deployment time. (Docker)

#### SKILLS

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- **Languages:** Python, Go, TypeScript, Bash, Java, SQL, C++, Rust, Solidity
- **Libraries:** PyTorch, Transformers, Whisper, W&B, LlamaIndex, LangChain, OpenAI SDK, LiteLLM, Cohere, Langfuse, Instructor, Pydantic, Huggingface, NumPy, BeautifulSoup, Ethers.js
- **Frameworks:** FastAPI, Fiber, Gin, NextJS, NestJS, React, Spring
- **Tools:** Huggingface TGI, Milvus (Zilliz), Openrouter, Jupyter, Docker, AWS, Grafana, Redis, PostgreSQL, Claude Code, Cursor, Vim, Git, Unix/Linux, Poetry, Ruff, Prisma

#### EDUCATION

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Melbourne, Australia

Monash University

July 2017 - December 2021

- *Bachelor of Robotics and Mechatronics Engineering (Upper Second-Class Honors)*
- **Key Achievements:** 2019/2020 - Engineering Leadership Program, 2018 - 1st place FSAE-A Presentation
- **Co-Curricular Activities:** Monash Motorsport FSAE - Business & Autonomous Systems Section

#### PROJECTS

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##### NFT Marketplace

- Created a multi-chain NFT marketplace that detects ERC721 and ERC1155 tokens in a user's wallet to buy and sell tokens.
- Programmed a smart contract that handles both ERC721 and ERC1155 tokens for listings and sales.

##### Random Words NFT

- Programmed ERC721 token contract to randomly generate traits, stored fully on-chain and deployed contract to Rinkeby testnet.
- Implemented single page application front-end to allow users to connect wallet and mint tokens.

##### Deep Reinforcement Learning for Intelligent Traffic Management

- Achieved 47% shorter waiting time and 10% increased average speed by crafting a novel reward function with expert information for traffic intersections in SUMO-RL.

##### Teleoperated Pose Estimation Robot

- Achieved 96.9% pose estimation accuracy of detected objects with an average of 0.29m discrepancy with max range of 10m, by combining a trained YOLOv4-Tiny model, non-linear regression, bounding box size and intrinsic camera properties.
- Led a team for data annotation and labelling for custom objects and trained model on cloud computing resources.
- Created Python scripts to automate dataset gathering in a ROS Gazebo simulator.