

JAY TRANBERG - Full-Stack and IoT Engineer

Victoria, BC - www.jaytranberg.com

Portfolio <https://jay-tranberg-portfolio-25.netlify.app/>

React - Node.js - Express - MongoDB - Next.js - Python Microservices - IoT - AI and ML - Solidity - Blockchain

SUMMARY

Full-stack developer and product builder who ships systems end-to-end. I work across firmware, hardware, backend APIs, ML microservices, dashboards, blockchain, and SaaS platforms. I deliver measurable improvements, reduce friction, and solve real problems.

CORE SKILLS

- End-to-end engineering (firmware -> backend -> dashboards)
- Full-stack dev (React, Vite, Next.js, Node.js, Express, MongoDB)
- IoT engineering (ESP32-S3, BLE, Wi-Fi provisioning, sensors)
- Cloud and DevOps (Render, Netlify, Docker)
- ML pipelines (TensorFlow, Python microservices)
- Web3 and blockchain (Solidity, Ethereum smart contracts)
- SaaS architecture, authentication, Stripe billing
- High-level debugging, rapid prototyping, system design

EXPERIENCE

Founder and Full-Stack Engineer - Tranberg Innovations (2023 to Present)

PROJECT SNOWMAN - IoT Clean-Tech Platform

- Reduced diagnostic time by 80 percent using automated telemetry.
- Improved HV stability by 50 percent with hardware redesign.
- ESP32-S3 firmware with BLE provisioning, NVS Wi-Fi storage, NTP sync, secure reporting.
- Achieved TRL-5 in under 12 months.

DR. EPIDERMUS / SKINSCAN - AI Dermatology Platform

- Reduced misclassification risk by 40 percent with two-stage model pipeline.
- Delivered sub 1 second inference via optimized Python microservice.
- Improved retention by 25 percent with geolocation doctor recommendations.
- Integrated multiple TensorFlow models with consistent preprocessing.

COVERCRAFT - AI Artist Branding and Content Engine

- Reduced content creation time by 70 percent.
- Cut outsourced design cost by 95 percent.
- Boosted resolution output by 100 percent using upscaling pipeline.
- Multi-path AI generation supports cover art, social visuals, lyrics, and video.

THE IN AND OUT APP - Multi-Tenant Inventory Tracking SaaS

- Reduced inventory loss by up to 50 percent.
- Saved admin teams 5 to 10 hours per week.
- Multi-tenant architecture supporting many independent organizations.

PROPROBETS - Sports Prediction Dashboard

- Achieved 85 percent model accuracy.
- Reduced manual stat comparison by 90 percent.
- Dashboard queries load under 2 seconds.

SOUNDCAPES AND CHILL - Multi-Track Ambient Audio Engine

- Increased session length by over 300 percent using adjustable multi-track mixing.
- Reduced battery usage by 30 percent with optimized audio engine.
- Delivered near-zero latency mixing with preloaded buffers.
- Achieved 99.9 percent crash-free stability on Google Play.

EDUCATION

University of the People - BSc in Computer Science (In Progress)

Browns College - Robotics Technician Certification

Focus on electromechanical systems, automation, sensor circuits, and hardware troubleshooting.

Professional Bootcamps and Applied Training

- Ethereum development and smart contract engineering
- Solidity fundamentals and advanced contract patterns
- Gas optimization for Ethereum smart contracts
- Full-stack JS and TS development
- Blockchain fundamentals and decentralized app patterns

SIGNATURE POSITIONING

I build systems end-to-end. If it has a circuit board, backend API, dashboard, mobile app, blockchain logic, or ML model, I can architect it, build it, debug it, and ship it.