Ansel Brandt
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GitHub: anselbrandt | LinkedIn

Profile

AI-focused full-stack developer specializing in scalable AI pipelines, RAG systems, and real-time data visualization for audio and text processing. Expertise in LLMs, NLP, audio processing, and vector search. Experienced in building scalable applications with Python, TypeScript, and cloud technologies. Background in computational geometry and construction project management.

Skills

AI & Data Science:
• Pydantic AI Agent Framework, LLMs, NLP, PyTorch, Llama.cpp, ChromaDB, Vector Search, CUDA
• Audio Processing, Speech-to-Text, Speaker Labelling

Backend & Cloud:
• FastAPI, Express.js, OAuth2, Docker, PostgreSQL, SQLite
• AWS (EC2, S3), Caddy, Prometheus, Grafana

Frontend & Visualization:
• TypeScript, React, Next.js, HTMX, Storybook
• D3.js, Deck.gl, Mapbox, GIS, GeoJSON, Vector Tiles

Other Technologies:
• IoT, MIDI, MQTT, WebRTC, V4L2, Raspberry Pi, Linux
• Julia, Go, MongoDB

Experience

Principal Developer | Acadium | Ottawa, ON | June 2025 - Present
• Lead technical architecture and development across legacy web/mobile platforms for marketing intern placement services and new AI-powered marketing services platform.
• Maintain and update existing Vue.js web application, Node.js API and job servers, while managing Android and iOS mobile applications updates and deployments
• Architect and implement agentic AI systems using Python, PydanticAI, FastAPI, and Next.js, including product design, user experience flows, and CI/CD automation.
• Administer AWS infrastructure (EC2, S3, CloudFront, Route 53) and manage MongoDB Atlas, ensuring scalable and secure deployments.
• Integrate third-party APIs and oversee credential management, deployment orchestration, and cross-platform release pipelines across web, mobile, and AI services.

Full-Stack Software Developer | Merinio | Montreal, QC | Aug 2022 - Dec 2023
• Developed React/React Native applications with Express.js and MongoDB, including services in Go.

- Led transition to Turborepo build system, optimizing CI/CD pipelines and Dockerized development environments.
- Designed and implemented geolocation and geofencing features for mobile applications.
- Developed CLI tools for secure database access, ensuring compliance with data privacy regulations.
- Conducted machine learning research for demand forecasting using time-series analysis.

General Contractor and Data Scientist | Self-Employed | 2012 - Present
- Built internal data visualization tools with React, Mapbox and deck.gl
- Web scraping with Puppeteer, captcha solving with OCR, data wrangling with Python
- Conducted feasibility studies, commissioned environmental reports, and managed permitting processes.
- Applied data-driven decision-making for cost estimation and risk assessment, integrating CAD/BIM workflows.

Journalism & Writing
- Staff Writer & Photojournalist | Hello West Travel | Vancouver, BC | 2010 - 2011
- Contributor & Food Reviewer | Beyond Robson | Vancouver, BC | 2009 - 2010

Education

McGill University
- B.Com in Quantitative Finance and Operations Research
- Minor in Music Technology
- Coursework in Computational Geometry, Computer Graphics and Inverse Kinematics

Emily Carr University
- Certificate in Industrial Design

Training & Certifications
- National Building Code of Canada & Quebec Construction Code (Ordre des Architectes du Québec)
- Chartered Financial Analyst (CFA) Program – Level 2 Candidate