Jacob MacInnis

Director of Engineering | Cloud & AI

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SUMMARY

Hands-on motivated engineering leader with 5+ years leading high-performing teams and architecting scalable, cloud-native distributed systems. Proven track record of fast, reliable shipping, optimizing engineering processes, driving major feature development, system migrations, leading teams toward 100% test coverage improving system reliability and ensuring long-term velocity and quality.

Combines technical expertise with strong leadership, clear communication, and strategic vision to drive innovation in remote-first environments. Known for ambitious, highly motivated work ethic and to lead by example, promote collaboration, and foster pragmatic, inclusive, friendly team cultures built on empathy to deliver intuitive solutions, and continuous improvement.

Applied AI/ML experience across NLP, LLMs, classification, image recognition, RAG, and agentic workflows. Proficient in TensorFlow, PyTorch, LangChain, and LangGraph, with certifications from Stanford, DeepLearning.AI, Duke, and Google – combining theory with real-world delivery.

KEY SKILLS

Frontend:	React, Redux, TypeScript, JavaScript
Backend:	Node.js, Express.js Python, FastAPI
Cloud:	AWS, GCP, Azure, Serverless Framework
ML/AI:	TensorFlow, PyTorch, LangChain, LangGraph, scikit-learn
Data:	Firestore, MongoDB, PostgreSQL, CouchDB, BigQuery, AWS S3
DevOps:	Docker, Circle CI, Terraform
Leadership:	Team Management, Coaching, Mentorship, Product Vision, Process Optimization

EXPERIENCE

06/2022 - Present **Director of Engineering, OneView Commerce** Remote/Boston

- Implemented global-scale cloud architecture for 10,000+ stores across North America, Europe and Australia, powering 1M+ daily transactions and hundreds of billions of dollars annually.
- Optimized deployment processes, significantly reducing downtime from several days to just 1-2 hours with a remarkable 99% success rate gaining hundreds of development hours per release.
- Engineered a serverless architecture using AWS and GCP, with over 400 Cloud Functions (Lambda, GCP and Firestore Functions), handling billions of requests a month with 99.99% uptime leveraging API Gateway, Firestore DB, AWS SQS, AWS SNS, AWS ECS.
- Directed the successful migration of legacy databases to Firestore, effectively reducing production database issues by over 100%, from over 20+ per week to fewer than 1 per quarter.
- Managed 3+ cross-functional teams, comprising (12+ engineers) across North America, Europe and Australia, focusing on hiring, mentorship, communication, performance management and growth planning.
- Partnered with operations, engineering and QA teams to redesign the CI/CD pipeline with streamlining code delivery and enabling a more efficient reliable process..
- Building scalable pipelines with Dataflow, Kotlin, Pub/Sub, and Firestore, ensuring reliable delivery of mission-critical transactions for reporting, analytics, and search in BigQuery.

03/2021 - 06/2022 **Engineering Manager, OneView Commerce** Remote/Boston

- Architected and led the development of a globally deployed order, pick-pack app for major retailers of 3500+ stores, featuring a cloud-native backend (AWS, GCP, Firestore), along with a React/Redux frontend enabling multi-billion dollar retailers to offer contactless shopping during Pandemic.

- Formulated a multicloud backend monorepo, creating a cloud-agnostic platform that facilitated AWS and Azure deployments while enabling future support for GCP.
- Led two cross-functional teams, managing over 10 engineers and overseeing full-stack development encompassing React, Node, TypeScript/JavaScript, and serverless architectures.
- Drove architectural enablement initiatives across 4 development teams (25 engineers), standardizing platform practices and accelerating knowledge transfer among product teams.
- Mentored engineers in system design, debugging, collaboration skills, and delivery best practices—sharpening their technical skills and soft skills, product understanding, and confidence under pressure, while committed to their growth and success.

| 07/2020 - 03/2021 | **Team Lead, Software Engineering, OneView Commerce** | Remote/Boston |

- Led a scrum team building fintech adjacent headless SaaS app with a focus on innovation and fast iteration
- Developed OneView's platform user management infrastructure that serves 100,000+ users globally across multiple SaaS products, analogous to AWS IAM's users, roles, policies, and permissions, utilizing AWS Cognito user pool.
- Revamped dev team meetings by introducing structured agendas and focused discussions, which improved cross-team alignment and momentum for 25+ engineers and 5 scrum teams.
- Built scalable backend services with AWS Lambda, S3, API Gateway, and Firestore for fast delivery.
- Led peer code reviews and technical knowledge sharing, conducting lunch-and-learn sessions on software design patterns and best practices to raise engineering standards across teams.

| 08/2019 - 07/2020 | **Full Stack Software Engineer, OneView Commerce** | Remote/Boston |

- Built a cloud-agnostic integration layer adopted by hundreds of cloud functions, that abstracted common service concepts into a unified codebase, dynamically mapping to AWS, Azure, and future providers—accelerating development cycles and reducing technical debt.
- Served on the cross-functional UI Tribe (product management, design, and engineering), providing direction on UI/UX feasibility and influencing product decisions with a technical lens.
- Assessed + fortified penetration test security measures, addressing vulnerabilities such as XSS and function-level access controls while improving API security key management.

| 02/2019 - 08/2019 | **Full Stack Engineer, Insight Global** | Remote/Boston |

- Developed a curbside pickup solution for Kroger, facilitating online purchases for pickup at designated locations such as Kroger and Walgreens stores.
- Built SaaS and headless POS features, incl. barcode handling, and mobile USB scanning.
- Translated business requirements into agile epics with sprint-sized, vertically sliced increments.

| 11/2018 - 04/2019 | **Architect & Full Stack Developer, Function Earth (self start-up)** | Remote/Boston |

- Constructed cross-platform React Native mobile applications for both iOS and Android devices.
- Integrated JavaScript Node.js backend services with RESTful API endpoints and MongoDB.

| 05/2018 - 11/2018 | **Developer Apprentice, Thinkful** | Remote/Boston |

- Deployed mobile-first responsive web applications using JavaScript Node, Express RESTful API, React.js, Redux, and databases such as Postgres and Mongo.

| 05/2015 - 07/2018 | **Founder & President, E-Prime Sourcing** | Salem, MA |

- Founded and scaled E-Prime Sourcing into a commercial warehouse, generating $1.29M+ in sales.
- Secured a $3M distribution deal and fulfilled 41K+ orders across Amazon, Walmart, and eBay.
- Built a Shopify site with 350+ products and listed 800+ SKUs across marketplaces.

EDUCATION

Stanford • Certificate, Machine Learning Specialization

- supervised/unsupervised/reinforcement learning, model evaluation, and tuning best practices.
- neural networks, regression, clustering, and ML model optimization taught by Andrew Ng.

Duke • Certificate, Managing Machine Learning Projects
- applied CRISP-DM framework, managed ML project lifecycle, and aligned teams for delivery.
- assess ML feasibility, manage data pipelines, and design production monitoring strategies.

DeepLearning.AI • Certificate, Machine Learning in Production
- covered deployment strategies, data drift detection, and model lifecycle management.
- built skills in packaging ML models, setting up monitoring, and maintaining production pipelines.

Thinkful • Certificate, Software Engineering
- 1,600 hours of intensive full-stack software engineering

Eastern Nazarene College • Bachelors, Child Psychology

SELECTED MACHINE LEARNING / AI PROJECTS

- **MCP App** – Explored MCP-style orchestration: with LangChain and LangGraph with side-by-side chatbots comparing LangChain's ReAct agent with a deterministic MCP pipeline to explore autonomous vs. explicit tool orchestration
- **R2AI** – A semi-autonomous code-refactoring agent using LangGraph; it lints code with Ruff and refactors via LLMs (local Mistral via Ollama or OpenAI) with human-in-the-loop feedback
- **Agent Cortex** – A local multi-tool agent (LangChain + Mistral 7B) featuring retrieval-augmented search (RAG), short/long-term memory (FAISS), web search, calculator and Python code tools. Set to LLaMA/Mistral and OpenAI
- **RAG API** – FastAPI backend using SentenceTransformers, FAISS and FLAN-T5 for retrieval-augmented question answering; supports dense retrieval, reranking and RAG Fusion modes
- **Summit Mind** – Fine-tuned neural networks with T5 models to summarise multi-turn conversations; built with Python/PyTorch and FastAPI, containerised with Docker and deployed on Cloud Run
- **Folia-Vision** – lightweight Computer Vision API classifying plant species or diseases from leaf images; uses transfer learning with TensorFlow/Keras, EfficientNet/MobileNet on the PlantVillage dataset and runs on serverless Cloud Run
- **Career Compass** – Production-grade binary classifier predicting employment status from profile data; built with TensorFlow/Keras, exposed via FastAPI and backed by PostgreSQL on Cloud Run

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KEY SKILLS

Tools:	Pandas, NumPy, Matplotlib, Seaborn
Data Skills:	Data Visualization, Data Analysis, Cleaning & Wrangling, Preprocessing
AI/ML Concepts:	Model Development, AI/ML Tech, Innovation Strategies
Leadership/Architecture:	Technical Guidance, Accountability Structures, Architectural Patterns