

Michael Nakayama

Staff engineer · AI agents & full-stack product

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EXPERIENCE

MagicSchool AI · Staff Engineer

Jan 2025 – Present · Remote

Raina AI teaching assistant (2026)

- Led the re-architecture of Raina, an AI teaching assistant handling **~1.1M conversations/week**, from a multi-step form flow to a tool-search-and-execute agent loop; shipped dark behind feature flags and ramped to **100% of production traffic with zero rollbacks**.
- Led a cross-functional team (engineering, AI enablement, design) that let teachers find and run **100+ MagicSchool tools from chat**, taking it from **MVP to production in 8 weeks**; owned routing, flags, analytics, and release.

Studio Mode (2025–2026)

- Built and shipped Studio Mode, a collaborative document workspace inside Raina that now produces **70,000+ AI-generated lesson plans, worksheets, and other documents per school day**, with about **one in four assistant turns** creating or editing a document.

Search chat threads (2026)

- Led "Search Chat Threads" from technical spec to production: designed and shipped Postgres full-text search over **18M existing chat threads** plus **~41K new threads per day**, with a 32-way hash-partitioned index keyed by user, a generated tsvector with GIN indexing, and row-level security.

Data Analysis Tool & platform (2025)

- Built the **Data Analysis Tool from zero to launch** as one of two core engineers: a conversational AI product where school administrators upload spreadsheets and get insights and charts; owned the NestJS file and query API, LLM query generation, and AWS deployment (ECS, Lambda, GitHub Actions, Secrets Manager).

Pursuit · Founding Full Stack Engineer

Feb 2024 – Nov 2024 · Remote

- Conceived and built a sales-forecasting ML product that won **three customers in its first month (>\$100K revenue)**, reaching 70–80% confidence on 3K test records with Temporal and scikit-learn.

Olo · Senior II Engineer

Mar 2022 – Feb 2024 · Remote

- Achieved a **5x throughput increase** on an event platform handling **1M+ daily events** through message deduplication and optimized distribution.
- Built a query-engine builder that let customers define computed data points at scale, keeping **300K+ data points** accurate daily under continuous ingestion.

Faithlife · Senior Engineer · Team Lead

Aug 2015 – Mar 2022 · Bellingham, WA

- Managed **4–8 direct reports**, leading growth conversations, technical design, and code review.

PROJECTS

Fantasy football decision engine · Python, LightGBM, PyTorch, scikit-learn, FastAPI, Next.js, Modal 2026

- Built a layered Monte Carlo NFL season simulator on **4.2M rows** of 2012–2026 NFL data that has generated **600M+ rows** of season trajectories, graded against Sleeper projections with calibration, CRPS, and coverage metrics by player tier.
- Ran it on pre-registered pass/fail gates, temporal holdouts, and leakage audits, which caught train/serve skew, a hindsight leak in the veteran model, and a row-duplicating data fan-out.

gemmr: trading-card grading · Python, OpenCV, PyTorch, Modal, Supabase

2026

- Built the card-centering service: a segmentation model, deskewed crop, and border detection, deployed on Modal.

SKILLS

Languages: TypeScript, JavaScript, Python, SQL, Go

AI: LLM agents & tool calling, Vercel AI SDK, MCP, Amazon Bedrock, Braintrust evals, Prompt engineering

ML: PyTorch, LightGBM, scikit-learn, OpenCV, Monte Carlo simulation, Probabilistic forecasting & calibration

Frameworks: React, Next.js, NestJS, Node.js, FastAPI, Playwright

Data & infra: Postgres/Supabase, AWS (ECS, Lambda), Trigger.dev, Temporal, Elasticsearch, Redis, Datadog, Amplitude

EDUCATION

B.S. Computer Science, Vanderbilt University · 2015