

Justin Hatch

Cambridge, Massachusetts • (503) 719-1783 • jihatch03@gmail.com • [Portfolio](#) • [LinkedIn](#) • [GitHub](#)

EDUCATION

University of Oregon

Eugene, Oregon

B.S. Computer Science, Specialization in Machine Learning, Artificial Intelligence & Data Science

Graduated: June 2026

- Dean's List | Department Honors | Oregon Blockchain Group | AI Club | Hack-a-thon winner (Quack Hacks II)

SKILLS

- **Languages & Core:** Python (Pandas, NumPy, Scikit-learn), SQL, TypeScript, React, C/C++, Next.js
- **AI Engineering:** Anthropic & OpenAI APIs, LangChain, LangGraph, multi-agent systems, RAG, vector DBs, tool use, structured outputs, prompt caching, LLM-as-judge eval, jailbreak hardening
- **ML Engineering:** XGBoost, SHAP, feature pipelines, hyperparameter tuning, cross-validation, MLflow, model deployment, A/B testing, time series
- **Backend & Infra:** FastAPI, Pydantic, Postgres, Dagster, dbt, Docker, AWS, CI/CD, REST APIs, Pytest
- **Certs:** DataCamp - Associate Data Engineer in SQL | Anthropic CCA-F (300-level)

EXPERIENCE

Horizon Intelligence Labs

Cambridge, Massachusetts

Software Engineer, AI/ML - Python | FastAPI | React | Google Cloud | Docker

August 2026 - Present

- Building and deploying production applications on Cortex, the company's AI platform
- Designing experiments and benchmarks evaluating model capabilities; contributing to Cortex SDK development
- Translating field insights into research directions alongside the research and platform teams

Machine & Minds

Remote

Applied AI Internship - Python | AWS Bedrock | Next.js

April 2026 - July 2026

- Machine & Minds is an applied AI firm that helps business leaders identify, build, and deploy AI systems that create real, measurable P&L impact.

Modern Amenities

Coburg, Oregon

AI Engineer Internship - Python | FastAPI | Claude | Prompt Caching | Prompt Engineering & Eval

April 2026 - June 2026

- Partnered with engineers to scope stakeholder requirements into AI features, shipping the **VendAR** microservice.
- Built a FastAPI sales chatbot on the Claude API qualifying prospects across dozens of machine SKUs for a 3D/AR demo serving **900+ users**; tool-use API emits structured calls so the frontend renders deterministic CTAs.
- Hardened the system prompt against jailbreak vectors via delimited scanning of untrusted input and output, achieving a **100% block rate** with **zero** prompt leaks across red-team evals.
- Cut input token costs **~90%** on cached requests by adding ephemeral cache control on the prefix with a 24h token budget.

Oregon Blockchain Group

Eugene, Oregon

Lead Software Engineer (*promoted from Software Developer*) - FastAPI (REST) | React

September 2024– June 2026

- Led 3 engineering projects, Crop Share (farm-to-store supply-chain provenance) and TrialWeave (GLP-1 cohort RWE analytics), translating stakeholder needs into scoped specs and acceptance criteria, shipping across a team of 3-5 developers.
- Building an agent orchestration harness on AWS Bedrock (Claude) that automates end-to-end workflows in a multi-tenant SaaS platform (domain under NDA).
- Drove **133%+ membership growth (6 to 14)** in under a year by serving on the recruitment board, pitching in core CS classes, and interviewing potential candidates.

PROJECTS

Churn Prediction + LLM Retention Email Pipeline - Python | Postgres | dbt | Dagster | XGBoost | MLflow | Claude | FastAPI | React

- Built a nightly churn-to-retention pipeline scoring **18,618 customers** at **0.79 ROC-AUC**, with XGBoost + TreeSHAP attributions persisted as structured prompt input for Claude-generated retention emails.
- Implemented tool-augmented email generation with structured outputs and **4 read-only Postgres tools**, grounding each email in the customer's live order and review history.
- Designed an LLM-as-judge eval with enum-typed verdicts against explicit success criteria, shifting rubric distribution from **8.5–9.0 to 4.0–8.0** and surfacing generator bugs (wrong CTA intent, prohibited offers, tone-label mismatch).
- Orchestrated the full Dagster asset graph (dbt build → training → batch scoring + SHAP → email gen → judge eval) over a Postgres medallion, automating proactive outreach for the top **500 priority users**.

Evergreen Capital AI-Governed On-Chain Prediction Fund - Python | FastAPI | Gemini | React

- Architected a **5-agent Gemini research desk** (Quant, Macro, Skeptic, Data Miner, Trader) that independently researches, debates via structured cross-examination, and produces weighted consensus votes triggering autonomous Polymarket trades.
- Built the FastAPI orchestration layer for agent debate, weighted vote aggregation, and signal handoff to on-chain execution — autonomous trade triggers with no human-in-the-loop.
- Built full-stack MVP in 24 hours with 2 teammates: **1st Place Solana Track, 2nd Place Polymarket Track at QuackHacks II.**

Market Data Pipeline + AI News Synthesis - Python | FastAPI | Supabase | AWS | Dagster | Alpaca | Yahoo Finance | LangChain

- Designed a Postgres medallion schema (Bronze → Silver → Gold → AI) keyed by (ticker, interval, timestamp), unblocking replayable analytics across **4.5M+ rows** for downstream ML and agent workloads.
- Built a Dagster ETL ingesting **230+ tickers** across 1m–1d bars with conflict-aware upserts and historical backfills, **100% idempotent reruns** with zero duplicates across dozens of runs.
- Deployed a scheduled LangChain agent synthesizing market context, news, and financial reports into source-attributed summaries persisted to Postgres, powering downstream RAG workflows.