Brendan McLaughlin

mclaughlin@stanford.edu — 650-924-5188 — github.com/brendanm12345 — www.brendanmclaughlin.me

EDUCATION

Stanford University, Stanford, CA   *BS Class of 2024, MS Class of 2025*
BS Computer Science / MS Computer Science: AI

Relevant Coursework:

- Machine Learning - CS 229
- Self-Improving AI Agents - CS 329A
- Deep Learning for Computer Vision - CS 231n
- Parallel Computing - CS 149
- Machine Learning with Graphs - CS 224W
- NLP with Deep Learning - CS 224n
- Deep Learning - CS 230
- Decision Making Under Uncertainty - CS 238
- Design & Analysis of Algorithms - CS 161
- Web Applications - CS 142

SKILLS

Python · TypeScript · C/C++ · Golang · Java · SQL · Next.js · React · PyTorch · CUDA · Tensorflow · JAX · PostgreSQL · Kubernetes · Spark · Kafka · Iceberg · Flink · Cassandra · AWS S3 · AWS EKS · Node.js · CSS · HTML

WORK EXPERIENCE

Stanford AI Lab (SAIL), HazyResearch, *Graduate Student AI Researcher*   Jan 2025 – Present

- Researching test-time compute scaling techniques & verification, advised by Chris Ré & Azalia Mirhoseini

Apple, *AI/ML Intern*   Jun 2024 – Sept 2024

- Engineered & shipped **21x faster** query pipeline for Apple's ML training data service using on-the-fly downsampling, significantly improving Apple Foundation Model experiment tracking (Java, Spark)
- Proceeded to implement a **90x speedup** using pre-computation & query federation (Kafka, Flink, Iceberg)
- Built fullstack playground app, accelerating API feature development and internal customer acquisition

Tesla, *Software Engineer Intern*   Jan 2024 – Apr 2024

- Rewrote core pieces of multimillion-dollar analytics application to move it from cloud to on-prem, **reducing costs by >2x** (Python, Spark, Kafka, Kubernetes, OpenSearch, Next.js)
- Implemented backend features to serve critical insights vehicle aerodynamics insights (Golang, Kafka)
- Built real-time data pipelines, saving logistics teams **$1000s/week** of manual extraction (Spark)

NoRamp Labs, *Software Engineer Intern*   Aug 2023 – Dec 2023

- Built secure password-less crypto wallet and shipped to 1000s of paying users in 1.5 months (Next.js, TypeScript)

Hatch Learning, *Co-Founder, CEO*   Aug 2020 – June 2024

- Founded & led profitable (4 years) K-2 education company, scaled to **$20,000 quarterly revenue**

PROJECTS

d3n: 1st place winner of Cognition Labs AI hackathon (twitter)

- Built AI agent orchestration framework (k8s for agents) in 24 hours with teammates (Python, FastAPI)

OnboardingAgents: A framework enabling web agents to master workflows from human demonstration (github)

- Implemented & benchmarked novel web agent with test-time retrieval of executable learned trajectories

AppBench: A preliminary benchmark for evaluating AI systems on web application generation tasks (paper)

- Built autonomous web-app evaluation framework, produced results ranking frontier models on web-app generation

Sage: Mobile app that creates purpose in elderly users through gardening (github)

- Led design & engineering, won **2nd place** for "best project", **1st place** for "best visual design" out of 40 teams

Imaginary MCTS Computer-Use Agent: Final project for *CS 238: Decision Making Under Uncertainty* (github)

- Developed novel test-time reasoning algorithm to improve computer agent task completion (Python)

Circuit: Multi-Agent Patient Message Routing System (demo)

- Built 24/7 medical assistant agent with RAG pipeline & real-time messaging. Demoed to Stanford Healthcare.

Patent Granted for 3-D Image Capture Device:

- Designed, built, and **patented** automated 3D image-capture device. USPTO 10,765,346 - 04/16/2020