Jack Fan

317-774-4456 | jackfan@college.harvard.edu | jackfandev.carrd.co
linkedin.com/in/jack-fan-dev/ | github.com/itsjackfan

Summary

Fast-moving and creative builder currently focussing on foundational ML and agentic continual learning paradigms in order to improve next-action prediction in applied AI use cases like browser copilots or agentic workflows. Diverse experience in foundational models/systems environments, in 0-to-1 environments (DevOps and infra-side), and especially across the full stack/product-side. Seeking high-impact and vitally challenging roles at fast-paced and tightknit teams working to bridge the present human-AI interaction gap, with long-term vision focused on democratizing productivity through AI.

Technical Skills

Programming Languages: Python, Rust, Go, R, C, C++, Javascript, Typescript, HTML/Tailwind CSS, SQL, NoSQL

Frameworks & Libraries: React.js, Next.js, Node.js, FastAPI, TensorFlow, PyTorch, Keras, NumPy, Pandas, Scikit-learn

AI/ML Tools: PydanticAI, FastMCP, LangChain, LangGraph, OpenAI, Google Gemini, Cohere, Claude, Groq, Ollama

Databases & Cloud: MongoDB, Supabase, Firebase, GCP, AWS, Pinecone, HelixDB

Development Tools: Git, Docker

Experience

Product/Forward-deployed + Research Engineer Sep 2025 - Present
ThirdLayer (YC W25) *San Francisco, CA*

- Product and forward-deployed work (Next.js/Typescript backend):
  - Built Asana and Attio integrations from ground up (OAuth/API interfacing + custom tools, prompts, tools/schemas, evals/tests).
  - Created custom MCP subagent architecture + relevant frontend elements using Vercel AI SDK (OAuth/authenticated MCP tooling, subagent attachment, tool calling, prompting).
  - Revamped Dex system prompts and agentic AI system refactor for improved context and performance; 2000+ users and 90+% single-action/single-workflow accuracy improvement on revamped integrations/agent system.
- Applied AI research/evals; Built agentic memory evaluation framework (Python) based on Meta's Agentic Research Environment (ARE). Whitepaper to be published.

Founding Lead Engineer Apr 2025 - Aug 2025
Series *New York, NY*

- Solo engineer for transition to alpha version. Built out Python FastAPI monolith backend (including server, applied AI/agentic work, iMessage communication, MongoDB storage, etc.), React/Typescript frontend, and all other relevant services. **Scaled from 3k to 14.8k total signups on the platform within 2 months.**
- Led development and release of product version beta (v̈3̈) including service-based Python/Go backend (base server, MongoDB, applied AI with Pydantic AI) and Next.js 15.3.3 frontend; **scaled from 0 to 200,000+ matchable p̈rofilesänd from 0 to 10,000+ signups within 3 weeks** (left to remain at school for Fall '25 semester).

Senior Software Engineer Oct 2024 - Jan 2025
Harvard Tech for Social Good *Cambridge, MA*

- Led 5-person engineering team in developing comprehensive impact statistics dashboard used by 90+ Ersilia contributors, tracking 180+ models across 17 countries and 200+ partner organizations
- Architected full-stack solution using Plotly Dash frontend and Python backend (Pandas/NumPy) to aggregate data from Airtable, WHO APIs, displaying 20+ key metrics including model categorization, community engagement, and publication impact

Software Engineer Sep 2024 - Dec 2024
Harvard Tech for Social Good *Cambridge, MA*

- Developed LLM-powered webscraper using Google's Gemini 1.5 Flash API to detect food pantry information discrepancies; 650x reduced scanning time across 8000+ AmpleHarvest pantries in the directory; reduced hallucinations by 6x, pipeline runtime by 1.5x, and increased accuracy by 2x through prompt engineering and efficient caching

Education

Harvard University Cambridge, MA
AB/SM Candidate, Computer Science *Sep 2024 – May 2028*
Relevant Coursework: Compositional AI Systems, Intro to Systems, Intro to Data Structures and Algorithms, Data Structures and Algorithms, Software Engineering in the Age of Generative AI, Advanced Topic in Data Science (applied ML e.g. transformers, CNNs, etc.), Intro to Probability Theory, Linear Algebra

Lexington High School Lexington, MA
Aug 2020 – Jun 2024