

# Jack Luo

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## EDUCATION

### Georgia Institute of Technology

Expected Grad: 2026

B.S. Computer Science | College of Computing | Artificial Intelligence & Embedded Systems Concentration | Cumulative GPA: 3.91 | Dean's List 3x

- **Relevant Coursework:** Deep Learning, Systems Architecture, Machine Learning, Computer Organization and C Programming, Advanced Data Structures in C++, Quantum Computing, Probability Theory, Linear Algebra, Applied Combinatorics
- **Organizations:** GT Hacker House, Trading @ GT, AI Safety Initiative, Supercomputing @ GT

## SKILLS

**Languages:** Python, C++, TypeScript, SQL, R, Java, Go

**Full-stack:** Next.js, API (FastAPI, Express.js), Database (Postgres, MongoDB), AWS (Bedrock, Lambda, EC2)

**AI&ML:** LangGraph, Pinecone, Python Lib (PyTorch, scikit-learn, Pandas, NumPy), TensorFlow, OpenCV, CloudWatch

**Tools:** Git, GitHub, GitHub Actions, ClickUp, Miro, Notion, Jest, LaTeX, Figma, Jupyter Notebooks, RStudio, Linux

## EXPERIENCE

### Technical Cofounder, Efficore

08/2024 - 06/2025

- Built a software control plane for approximately 50-unit residential communities on Electriq Power systems. Wrote an edge agent that orchestrates inverters, PV, and batteries, with a CT-clamp telemetry pipeline and fault-tolerant device drivers for a legacy vendor protocol.
- Implemented an optimizer and minute-level scheduler that forecasts site load and solar, simulates strategies in a digital twin, then executes charge, discharge, and load-shift commands. Two pilots in Vancouver and Santa Barbara reduced resident utility bills by about 25 percent.
- Conducted over 100 stakeholder interviews, validated market demand and refined product direction with advisors Jim Murphy, Stephen Honikman

### Lead Developer, ASJ Trading

01/2024 - 07/2024

- Replaced manual spreadsheets with a Python and C++ research stack that backtests over 1,000 equities per run. Built a Pandas ETL with QuickFS and Alpha Vantage integration, schema normalization, and reproducible data snapshots through unit testing
- Implemented Stock Model V2 combining Graham analysis, Magic Formula ranks, and P/E filters; achieved an 18 percent simulated return over 1.5 years, about 2x the S&P baseline, with a high-resolution QuantConnect harness for 20-year sweeps, walk-forward validation.
- Wired live market data and sentiments from Reddit and Twitter to time inflection risk; secured 5,000 dollars and Boston University partnership.

## PROJECTS

### MAGK Excel (AI Financial Workflow Automation)

Electron, Next.js, shadcn/ui, AWS Chalice, Bedrock, Deno, Zustand, MCP

- Built an open source copilot chat that turns plain English into executable workflow graphs on the canvas, auto-selects MCP tools, and persists per-user preferences; fast interactive latency, zero manual configuration, and durable preference vector memory for repeat runs.
- Engineered a typed MCP tool plane with an Electron-side server manager for stdio and HTTP transports, one-click tool discovery credential vaulting, and live telemetry; sandboxed LLM-generated TypeScript and Python in Deno isolates with CPU and memory quotas.
- Piloted across securities and private equity, deployed to 100+ analysts at multiple firms and cut 40 percent of manual reporting and data collection.

### Sunday (AI Email and Calendar Triage)

TypeScript, React Query, Express.js, Python FastAPI, Pinecone, Redis, CI/CD.

- Turns inbox into an action queue with triage, summaries, task extraction, and one-click follow ups. Saves about 3 minutes per email and lets users clear 25 to 50 emails per triage session daily. Delivers a daily briefing and cuts inbox time without training or playbooks.
- Architecture built for speed and trust: Next.js front end, event driven services on Node or Python, model router across GPT-4.1, Claude, and local models, standardized tool access via MCP, Postgres plus vector search, and Redis caching. Human in the loop on every send.

## LEADERSHIP

### Founder and Operator, Hacker House Network

07/2023 - Present (Summer Seasonal)

- Built and scaled live-in builder houses across SF, NYC, and Georgia Tech; owned end-to-end ops logistics, 15,000 dollar operating budget.
- Drove outcomes through regular communication cadence and community weekly demo nights, visiting-founder salons, and peer accountability resulting in multiple startup incubations across AI, biotech, and finance; alumni accepted to Y Combinator, Residency, and Fermilab.

## AWARDS and CERTIFICATIONS

**Finalist** - DRF Pitch @ Penn (2025), **Semifinalist** - Northwestern VentureCat Competition (2025), **Top 15** - Berkeley AI Hackathon (2024), **First Place** - Digitized Hackathon (2022), **First Place** - Code Day (2022), **Honorable Mention** - OpenHacks (2022), **AIME Qualifier** - Mathematical Association of America (2021), **Selected from Top 10%** - HackMIT (2023, 2025), **Selected from Top 7%** - TreeHacks, Stanford University (2024)

**Prompt Engineering** - DeepLearning.AI (2024), **Deep Learning Specialization** - Coursera (2023), **ClickUp Project Management** - ClickUp (2023), **Advanced Data Structures** - Stepik (2023)