

Sean Lai

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EDUCATION

New York University

New York, NY

Bachelor of Science in Computer Science, Minor in Philosophy & Mathematics | GPA: 3.8/4.0

May 2027

Awards: Manus AI Fellow (first undergrad in cohort), Gunter Georgi Innovation Award (1 of 400), Dean's List

EXPERIENCE

Data Engineer Intern (AI)

Jun. 2025 – Aug. 2025

Boost Payment Solutions

New York, NY

- Built RAG system with AWS Lambda, EC2, RDS, and Python, catching 99.2% of alias misses from fuzzy match
- Improved FAISS workflow precision from 60% to 99.5% by finetuning embedding models on alias resolution data
- Performed QLoRA on Phi-2 and TinyLlama for data ingestion copilot, processing 10000 internal requests daily
- Set up Terraform modules to deploy a Python copilot that reduced ops data reconciliation workload by 2+ hours

Research Engineering Lead

Jan. 2024 – Present

New York University High Speed Research Lab

New York, NY

- Improved Python open source package and documentation, reducing jitter by 20% and enabling websocket support
- Developed experimental pipeline demo with Python, YOLO, and JavaScript, for research experimentation product
- Built end to end UI overhaul with React enabling MCP access to create 3x speed workflows for experiments
- Redeveloped Unreal Engine 5 C++ plugin, increasing overall user base by 10% from existing labs and users

Undergraduate Research Fellow

Jun. 2024 – Sep. 2024

New York University

New York, NY

- Collaborated with Dr. Ingrid Paredes to implement sustainable engineering curriculum reaching 1000+ students
- Built word cloud and embedding NLP models to reduce processing times by 25% and influence faculty decisions
- Implemented sentiment analysis models alongside data processing/cleaning for 300+ student sample responses

Vice President

Sep. 2023 – Present

Tech@NYU

New York, NY

- Built internal member tooling systems with NextJS to manage 300+ active members to optimize event hosting
- Launched hiring hackathon to connect 3 startups to 220 students, establishing early talent hiring pipelines
- Secured 10+ speakers for events, including Terri Burns (Forbes 30u30) and Baylor Adams (ZFellows)
- Revamped sponsorship strategy, growing total sponsorships by \$10K from Vercel, Anthropic, Adobe, and Figma

PROJECTS

AI Navigator | *PyTorch, Numpy, Sklearn, Transformers*

Jan. 2025 – Present

- Built top racing bot for NYU Competition by optimizing VPR algorithm and inference to be <100ms
- Created in team of 4 embodied navigator using pinhole camera models with pre-trained SIFT feature set

Plugma | *TypeScript, NextJS, ExpressJS, AWS, PostgreSQL, Supabase*

Mar. 2025 – Present

- Developed event platform to perform aggregate ML analysis on 200 events and help grow community by 20%
- Designed scalable full-stack system (Next.js, Express.js, AWS) handling concurrent users with real-time insights

AutoGo; Self-playing Go Board | *Python, Numpy, Arduino, Raspberry Pi, Linux*

Sep. 2023 – Dec. 2023

- Won 1st place (1 of 400+) in NYU RAD Design Competition for best product pitch and MVP execution
- Built AI interface using Python, TensorFlow, and Raspberry Pi, achieving full prototype demo within 8 weeks
- Developed flood-fill like algorithm to predict game states and construct removal paths for self-playing board

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL, C++

Frameworks: React, Next.js, Node.js, Flask, Express.js, Unity, Unreal Engine 5

Developer Tools: Git, Docker, CI/CD, AWS, Supabase, PostgreSQL, Github Copilot

Libraries: PyTorch, NumPy, pandas, scikit-learn, TensorFlow, Transformers, Tailwind CSS, Framer Motion

Interests: Broadway, Operas, Pilates, Philosophy