

Sean Lai

New York, NY | 347-646-8764 | seanlai221@gmail.com | [linkedin.com/in/sean-sh-lai](https://www.linkedin.com/in/sean-sh-lai) | github.com/sean-lai-sh

EDUCATION

New York University

New York, NY

Bachelor of Science in Computer Science, Minor in Mathematics | GPA: 3.9/4.0

May 2027

Coursework: Machine Learning, Robot Vision, Algorithms, Computer Architecture, Data Structures

EXPERIENCE

AI Undergraduate Research Assistant

Mar 2025 – Present

New York University

New York, NY

- Working under AI4CE lab researching optimization techniques to reduce VLA and VLM model training time
- Optimizing open-source SimplierEnv to enable parallel computational benchmarks with estimated savings by 3x
- Reducing VRAM usage on PI0 model training using Hugging Face's 8-bit optimizers and BF16 computation

Computer Networking Undergraduate Research Assistant

Jan 2024 – Present

New York University High Speed Research Lab

New York, NY

- Redeveloped Unreal Engine 5 C++ plugin, increasing overall user base by 10% from existing labs and users
- Improved Python open source package and documentation, reducing jitter by 20% and enabling websocket support
- Writing 2 white papers for Python client on websocket and low latency infrastructure for 100+ researchers at NYU

Undergraduate Research Fellow

June 2024 – Sept. 2024

New York University

New York, NY

- Collaborated with Dr. Ingrid Paredes to implement sustainable engineering curriculum impacting 1000+ students
- Built word cloud and embedding NLP models to reduce processing times by 25% and persuade faculty
- Implemented sentiment analysis models alongside data processing/cleaning for 300+ student sample responses
- Facilitated data collection and aggregation techniques to understand student opinions on current initiatives

Startup Week Co-lead

Sept. 2023 – Present

Tech@NYU

New York, NY

- Hosted hiring hackathon to connect 3 startups to 220 students, creating an integrated early talent hiring pipeline
- Hosted NYU's student-run startup festival, bringing speakers like Terri Burns and Baylor Adams across 10 events
- Developed backend framework using Django and pandas to process and analyze 500 data points from 10 events
- Created internal member tooling systems with NextJS to manage 300+ active members to optimize event hosting

PROJECTS

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

Jan. 2025 – Present

- Created in team of 4 embodied navigator using pinhole camera models with pre-trained SIFT feature set
- Developed pipeline from feature extraction to exploration algorithms to reduce the need for human guidance

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 database schema and full-stack design to support concurrent users and scale with user demand

AutoGo | *Python, Numpy, Arduino, Raspberry Pi, Linux*

Sept. 2023 – Dec. 2023

- Developed a product for Alzheimer's memory training, working with a \$200 budget, using agile methodology
- Led market research, pitch deck creation, and speaking prep to win NYU design competition (1 out of 400)
- Designed game logic and AI interface using Python, NumPy, and TensorFlow, hosted on a Raspberry Pi
- Created flood fill algorithm to predict game states and paths for self-playing board alongside game analysis

TECHNICAL SKILLS

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

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

Developer Tools: Git, CI/CD, AWS, Supabase, PostgreSQL

Libraries: PyTorch, pandas, NumPy, Matplotlib, Tensorflow, Sklearn, TailwindCSS, Framer-motion