

# Neil Tripathi

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GitHub: [github.com/neilt93](https://github.com/neilt93)

## EDUCATION

### New York University

B.A. Computer Science, GPA: 3.74/4.00

- Teaching Assistant for Database Design
- Relevant modules: NLP, Artificial Intelligence, Machine Learning, Cryptography, Database Design, Operating Systems

### St Olave's Grammar School

A-Levels: Mathematics, Further Mathematics, Computer Science, Physics — A\*A\*A\*

Sep 2022 – Dec 2025 (Current)

New York, NY

Sep 2016 – Jun 2022

London, UK

## RESEARCH & PUBLICATIONS

### Benchmarking Commonsense Visual Reasoning in Vision-Language Models

2025

Co-author; manuscript in preparation

- Designed diagnostic datasets probing viewpoint/occlusion shifts; built automatic graders to detect hallucination and inconsistency.
- Evaluated GPT-4V, Gemini, and Claude variants; reported failure modes and reliability metrics to guide model/prompt improvements.

### Legal Text Classification with BERT / Legal-BERT

2024

Co-author; course paper (NLP)

- Fine-tuned BERT-family models on statutory/contract corpora; compared against classical baselines with reproducible training scripts and report.

## EXPERIENCE

### Sentient Foundation

AI Product & Research Intern

May 2025 – Present

New York City (Hybrid)

- Extensive market research and user cohort analysis with agent usage to identify key pain points and product opportunities.
- Designed evaluation datasets to rigorously test performance of the Unhinged Dobby model and benchmark against competitors.
- Worked closely with the back-end team to rapidly prototype new features and improvements for agent pipelines.
- Contributed to research directions that improve AI agent reliability and user experience.

### New York University

Jan 2025 – May 2025

New York City, NY

Teaching Assistant — Database Design

- Led in-class sessions; taught SQL, MongoDB, Flask/Jinja and schema design; held office hours and supported 50+ students.

### 4mainstreet.ai

ML/Full-Stack Intern

May 2024 – Sep 2024

Fremont, CA (Remote)

- Built ML/data pipelines for customer voice/text data; integrated outputs into a Flutter front-end.
- Fine-tuned Llama 3 8B, Gemini, and GPT-3 models; optimised cloud compute usage.

### Scroll.io

Blockchain Developer Intern

May 2023 – Sep 2023

New York City, NY (Remote)

- Created a Discord analytics tool for a 20K+ member community; automated data pipelines into Google BigQuery.

### Out of the Box Club

Volunteer Robotics Instructor

Jan 2021 – Sep 2021

London, UK

- Taught children robotics with LEGO Mindstorms; designed the club website.

## PROJECTS

### Sympli - Voice-First Health Companion App

Aug 2025 – Present

New York, NY

Technical Co-Founder

- Co-founded Sympli, a healthcare app that captures symptoms by voice and generates clinician-ready summaries.
- Built the full stack (TypeScript + Supabase/Postgres) and a HIPAA-aware AI pipeline (speech → transcription → information extraction → summary).
- Self-hosted an LLM on AWS for privacy and governance; added evaluation harnesses for accuracy, latency, and hallucination rate.

### 1:72 Scale HVAC Assembly Part Counter

June 2025 – Present

New York City, NY

Freelance Computer Vision Developer - Contract

- Trained a custom detector to recognise and count small parts in 1:72 HVAC kits; curated a video-to-frame dataset.
- Handled variable lighting and noise with targeted augmentation to improve detection accuracy.

### NFT Marketplace

2023

Personal Project

- Implemented a Solidity smart contract for minting/trading NFTs; delivered a complex front end with Vite and HTML/CSS.

### Hackathons & Competitions

2022 – 2024

Various

- Finalist in a Solana game hackathon; built a Polkadot-based game with NFT rewards that won a prize.
- Developed an Ethereum Kickstarter-style dApp for project funding approvals.

## TECHNICAL SKILLS

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### **Programming**

- Python, Java, C, TypeScript, SQL, Rust, Solidity

### **AI/ML**

- PyTorch, TensorFlow, LLM fine-tuning, evaluation pipelines, model optimisation

### **Data/Cloud**

- Postgres, MongoDB, BigQuery, Supabase, AWS, Docker, REST APIs

## LANGUAGES

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- English (fluent), Hindi (fluent), Spanish (intermediate), French (basic)