Charles Gao

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EDUCATION

Presidential Scholar at the University of Southern California — Los Angeles, CA
B.S. in Cognitive Science and AI — *Aug. 2024 – June 2027*
- USC merit-based half-tuition scholarship
- *Cumulative GPA*: 3.7/4.0 | *Honors*: Dean's List

Phillips Exeter Academy — Exeter, NH
High School Diploma — *Sep. 2021 – June 2024*
- *SAT Score*: 1580 | National Merit Scholar | Highest Academic Honors
- *Relevant Coursework*: Quantum Mechanics, Multivariable Calculus, Statistical Thermodynamics, Modern Physics

TECHNICAL SKILLS

Languages: Python, C/C++, Java, JavaScript, SQL
Frameworks: React, Next.js, FastAPI, Tailwind CSS, LangChain, Express.js
Developer Tools: Git, Cursor, VS Code, Visual Studio, Docker
Libraries: PyTorch, pandas, NumPy, Hugging Face, scikit-learn, Keras
Hobbies: Club Water Polo, Tennis, Cycling, Chess

PROFESSIONAL EXPERIENCE

Growth Engineer, Lightweight Labs — June. 2025 – July. 2025
Lightweight Labs — *New York, NY*
- Worked directly under founders, leading growth, engineering a demand gen engine and outreach flow.
- Led redesign of frontend and company branding.

Principal Software Engineer — Oct. 2024 – Feb. 2025
Kardn — *San Francisco, CA*
- Developed and led a strategic go-to-market plan for AI startup, leveraging data-driven analysis to uncover revenue streams and optimize market penetration
- Engineered and developed a full-stack browser application (React, Next.js)

AI Researcher at NYU Langone Health — June. 2023 – Nov. 2023
NYU Langone Health — *New York City, NY*
- Engineered and fine-tuned NLP models (Doc2Vec, BioBERT) to predict early termination of clinical trials, using deep learning and 21 unique features to enable clinical trial risk assessments and observed semantic signals of early trial termination.
- Developed data pipelines to preprocess, clean, and curate a dataset of 400000 individual trials from clinicaltrials.gov, isolating key risk factors for trial discontinuation and delivering semantic insights through feature engineering.

Researcher at the University of Cambridge — June. 2022 – Oct.2022
University of Cambridge — *Cambridge, England*
- Collaborated with Professor Mohammed Taher Pilehvar to learn and apply applications of Natural Language Processing, studying specifically bias and attention in language models.
- Led a 12-week investigation into bias within word embeddings, generating a whitepaper of insights and recommendations to improve algorithmic fairness.

FOUNDING EXPERIENCE

Co-Founder, Developer at USC Lavalab — Jan. 2025 – May. 2025
LavaLab @ USC — *Los Angeles, CA*
- Built Trifect, a ML-based 3PL Matchmaking Company at USC's premier startup incubator
- Engineered a dual-encoder architecture ML model and pitched to a board of product leads and Co-Founders at companies such Uber, Lyft, and Bird.

Captain of Varsity Water Polo, 3-Time All-American Athlete — Sep. 2021 – Jun. 2024
Phillips Exeter Academy and Greenwich Aquatics — *Exeter, NH and Greenwich, CT*
- Guided team to a 2nd-place finish in the New England Preparatory School Athletic Council (NEPSAC)