

Charles Gao

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EDUCATION

Presidential Scholar at the University of Southern California

Los Angeles, CA

B.S. in Computer Science and Cognitive Science

Aug. 2024 – Dec. 2027

- USC half-tuition scholarship | Relevant Coursework: Data Structures, Discrete Mathematics, OOP Programming
- *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*
- Captain of Varsity Water Polo Team, 3-Time All-American

TECHNICAL SKILLS

Languages: Python, C/C++, Java, JavaScript, TypeScript, SQL, R

Frameworks: React, Next.js, FastAPI, Prisma, GraphQL, Tailwind CSS, LangChain, Express.js, Node.js

Developer Tools: Git, Cursor, VS Code, Visual Studio, Docker, GitHub Actions, Vercel, Render

Systems & Cloud: Linux/Unix, Bash, HTTP/REST, AWS, Lambda, GCP

Data & ML: PostgreSQL, MongoDB, matplotlib, PyTorch, NumPy, pandas, scikit-learn, scipy, Tableau, HuggingFace

ENGINEERING EXPERIENCE

Incoming Software Engineer Intern @ Salesforce

June 2026 – Sept. 2026

Availability and Infrastructure Team

San Francisco, CA

Software Engineer

Jan. 2025 – May 2025

LavaLab (USC's Premier student-run Incubator)

Los Angeles, CA

- Built a transformer + contrastive learning retrieval/ranking model to recommend 3PL partners to businesses
- Deployed **PyTorch**-based ML system via Railway with a **TypeScript/React/Next.js** full-stack web app
- Trained on **15,000** company and 3PL profiles; achieved **0.89 ROC-AUC** on held-out evaluation

Growth Engineer

June 2025 – Jul. 2025

Lightweight Labs (Seed, Quiet Capital)

New York, NY

- Refactored and shipped **frontend** improvements, improving core user flow and **maintainability**
- Conducted **25+** user/research interviews with accountants to translate workflows into engineering priorities
- Collaborated with the founders Aaron Iba (former GP at YC) and David Yang (YC acq. founder) to ship **power-user** capabilities and refine **edge-case handling** across product flows

RESEARCH EXPERIENCE

Researcher

June 2023 – Nov. 2023

NYU Langone Health (See ClinicalTrials Project)

New York, NY

- Engineered interpretable ML pipelines to analyze clinical risk factors across 400K+ healthcare records

PROJECTS & COMPANIES

Gleame

Oct. 2025 – Present

Shopify, Figma, React, TypeScript, JavaScript, Node.js, Git, Supabase

Los Angeles, CA

- Built a **Shopify**-native embedded app integrated via **App Bridge** and deployed storefront widgets through **Liquid theme extensions**, enabling configurable product-page image transformations
- Designed and deployed production-grade backend services (**Node.js** + **Supabase/Postgres**) to support **25+** live merchants and 20K ARR with real-time image processing workflows.

ClinicalTrials

June. 2023 – Nov. 2023

BERT, Pytorch, NLP, data analysis, data curation, clinicaltrials.gov

New York, NY

- Built a **multimodal** deep-learning model combining **Transformer-based NLP** to assess clinical trial risk
- Built preprocessing pipelines for **400,000+** clinical trial records, including tokenization and categorical encoding
- Fused semantic representations with tabular features via late fusion + MLP head to identify drivers of trial error
- Achieved **0.79 ROC-AUC** / **0.70 F1** on held-out evaluation using a grouped split to prevent leakage