Nelson Gou

Philadelphia · (408) 607-8769 · nel4gou@gmail.com · linkedin.com/in/nelson-gou/ · github.com/ng8165 · nelsongou.com · US Citizen

EDUCATION

University of Pennsylvania — **Philadelphia, PA**
Computer Engineering, BSE (AI & Robotics) | Minors: Mathematics, Entrepreneurship | GPA: 4.0/4.0 — *August 2025 - May 2028*

- Activities: Benjamin Franklin Scholars honors program, TEDxPenn Operations, Penn Glee Club Bass Section Leader
- Relevant Coursework: Advanced Algorithms (CIS 3200, in progress), Applied Machine Learning (CIS 4190, in progress), Algorithms & Data Structures (CIS 1210), Intermediate Programming (CIS 1200), Computer Systems (CIS 2400), Discrete Math (CIS 1600), Linear Algebra (MATH 2400), Probability (STAT 4300), Multivariable Calculus (MATH 1410)

The Harker School — **San Jose, CA**
High School Diploma | GPA: 4.58/4.80 W, 3.96/4.00 UW — *August 2021 - May 2025*

WORK EXPERIENCE

Sync Labs — **San Francisco, CA**
Software Engineer Intern — *June 2026 - August 2026*

- Built a voice-based generative dashboard using LLMs, developing backend infrastructure and voice features from scratch
- Developed a trends platform generating insights from patient notes, used for daily clinical tracking and weekly risk meetings
- Built a Medicare reimbursement platform, and gathered customer feedback in person with senior center care staff
- Operated as one of two engineers on a 4-person team, taking complete ownership of features from architecture to deployment
- Served ~100 residents, driving 34% increase in care interventions, 25% decrease in falls, and 13% increase in 1-on-1 time

Sync Labs — **Philadelphia, PA**
Software Engineer Co-op (part-time) — *September 2025 - May 2026*

- Owned end-to-end migration of backend infra from AWS to GCP with zero downtime while decreasing monthly cost by 75%
- Designed and shipped a client-facing status board with an in-app help chatbot, iterating based on direct client/team feedback
- Represented the company at senior care conferences to secure shadowing/client partnerships and gather insights

University of Pennsylvania — **Philadelphia, PA**
Teaching Assistant, Algorithms & Data Structures (CIS 1210) — *August 2026 - Present*

- Lead weekly recitations of ~20 students, re-teaching lecture material on graphs (BFS/DFS, Dijkstra's), divide & conquer, etc.
- Host weekly office hours and grade problem sets for a 200+ student course, providing debugging and algorithmic feedback

HYBR Group — **Remote**
Web Development Intern — *June 2023 - February 2024*

- Enhanced HYBR's online presence by using WordPress and Figma to design and implement a new website: hybrgroup.net
- Improved HYBR's sales pipeline by integrating a Pipedrive CRM account into the website to direct leads to the sales team

ACTIVITIES

HarkerDev Software Development Organization — **San Jose, CA**
President / Project Lead — *December 2022 - May 2025*

- Led 10-member team to develop apps for students, like Reading (helping 1200+ students track summer reading books)
- Project Lead of Activities app, helping 800+ upper schoolers track club rosters and see club events: activities.harker.org

SKILLS

- Languages: Java, C, C++, Python, JavaScript, TypeScript, OCaml, Bash Scripting, LaTeX
- Algorithms: divide & conquer, DP, BFS/DFS, Dijkstra, MSTs, Hashing, Heaps, Trees, Graphs, Tries, proof-based analysis
- AI/ML: Claude/OpenAI/Gemini APIs, agentic workflows, AI-native development, AI coding agents (Claude Code, Codex)
- Backend: Node.js, Express/Koa, AWS (DynamoDB, Lambda, HealthLake), Google Cloud, Firebase, MongoDB
- Frontend: React.js, Next.js, Vue.js, Tailwind CSS, Bootstrap CSS
- Embedded Systems: TI MSP432 Microcontroller, Raspberry Pi, Arduino Uno R4, C/C++, Python

AWARDS

USA Computing Olympiad: Gold Competitor, March 2022; Silver Competitor, December 2020

Synopsys Science Fair: Technical Excellence Award, Institute of Electrical and Electronics Engineers, March 2024

DECA International Conference: 7th Place internationally, International Business Plan category (tiny.cc/neocreteplan24)

National Merit Scholar: recipient of National Merit (NMSC) $2500 Scholarship, March 2025