Nicholas Le

(951) 264-7749 | nicholas73.le@gmail.com | nicholasle.dev

Education

University of California, San Diego Aug. 2024 – June 2027
B.S. in Computer Engineering - 3.8 GPA *San Diego, CA*

Work Experience

Software Engineering Intern June 2025 – Present
Health1st.ai — WinFully on Technologies *Remote (Alpharetta, GA)*

- Built **FastAPI microservices** handling **HL7, FHIR, and X12** healthcare data formats with async processing, **PostgreSQL**, and **Redis** caching.
- Implemented **real-time voice transcription** and commands using **OpenAI Whisper** for clinical workflows, integrated into **Next.js** dashboard.
- Developed **AI mapping service** using **LangChain and GPT-4** to transform healthcare data between standard formats (HL7, FHIR, X12, CCDA).
- Created tenant-isolated scheduler for automated data syncing across APIs and SFTP using **GCP Cloud Scheduler and Pub/Sub**.
- Deployed microservices on **Google Cloud Run** with **Docker** containerization and CI/CD pipelines via Cloud Build.

Lead Developer and Assistant Instructor Mar. 2022 – Feb. 2024
Rowland Heights Golf Academy *Jurupa Valley, CA*

- Built **iOS app in SwiftUI** with **Firebase Auth and Firestore** to visualize swing metrics and performance trends, eliminating manual data tracking for **50+ students**.
- Analyzed **Trackman launch monitor** and wearable sensor data to provide biomechanical feedback that improved swing consistency by **25%**.
- Designed **PostgreSQL database** for performance tracking and automated weekly progress reports.

Projects

NBA Player Props EV Engine *Python, NumPy, SciPy, Pandas, DuckDB* Dec. 2025

- Built a **Monte Carlo simulation engine** (20K+ iterations) using a **Gaussian copula** for correlated stat sampling and **Negative Binomial distributions** to estimate outcome probabilities across **12 player prop markets**.
- Engineered **context-aware projection adjustments** using positional defensive splits, pace elasticity, and **Bayesian shrinkage** to stabilize estimates under limited sample sizes.
- Developed an **automated data pipeline** integrating NBA Stats API with intelligent caching, stale-data detection, and fuzzy player name matching for reproducible daily model runs.
- Implemented **expected-value filtering and risk guardrails**, including probability caps, minimum edge thresholds, and correlated-bet deduplication, with optional **fractional Kelly sizing** for simulation-based evaluation.

RoboSub Team Website — *React, JavaScript, HTML/CSS, MongoDB, Figma, Git* Jan. 2025 – Present

- Building full-stack platform for **UCSD RoboSub** with **React** frontend and **Express.js/MongoDB** backend, featuring dynamic content management, **user authentication**, and role-based access control.
- Designed **Figma prototypes** and implemented **responsive React components** with mobile-first design serving **40+ team members**.
- Architected **RESTful API** with **MongoDB** to serve real-time project logs, event calendars, and member directories.
- Implemented **CI/CD pipelines** via **GitHub Actions** for automated testing and deployment to **Netlify**, reducing release time by **50%**.

Skills and Coursework

Languages: Java, C, JavaScript, TypeScript, HTML/CSS, Swift, Python, Bash
Frameworks/Libraries: FastAPI, React, NumPy, Pandas, SciPy, Node.js, Docker, Firebase, MongoDB
Certifications: Pearson IT Specialist, IC3 Digital Literacy, FCC Responsive Web Design, Social Media for Business
Data & Modeling: Monte Carlo Simulation, Probabilistic Modeling, Bayesian Methods, Statistical Evaluation
Relevant Courses: Accelerated Intro to Programming (CSE 11), Data Structures & OOP (CSE 12), Discrete Mathematics—proofs & combinatorics (CSE 20), Systems Programming & Tools (CSE 29), Computer Organization & Architecture (CSE 30) & Circuit Analysis (ECE 35)