Gary Samuel

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EDUCATION

- **California State University, Fullerton** *Expected May 2027*
  Bachelor of Science in ***Computer Science & Minor in Data Science***
  Coursework: Data Structures & Algorithm, Compiler Design, Algorithm Engineering, OS, Computer Architectures.

EXPERIENCE

Tutoring Club & Novel Prep – Math & Computer Science Instructor (Part-Time) *May 2024 – Present*

- Guide students in building Python-based AP Computer Science Principles projects, debugging algorithms, and optimizing data structures for performance, contributing to an average AP score of 4.3.
- Design and deploy a web project-based learning platform with code review workflows, boosting engagement by 35% and reducing repetitive grading time by 50%.
- Introduce Git/GitHub for projects, simulating a real collaborative development and version control environment.

HackHarvard 2025, Cambridge – Selected Hackathon Participant *October 2025*

- Engineered an Apple Vision Pro app with **Swift, SwiftUI, and RealityKit**, anchoring interactive text overlays in 3D space using **PDFKit** for document parsing and rendering.
- Built a **low-latency AI pipeline** integrating **Gemini API** for contextual summarization/simplification and **ElevenLabs API** for real-time natural speech synthesis (<150 ms response).
- Implemented a **gaze-tracking adaptive interface** that dynamically adjusts text highlighting, narration speed, and context depth per user profile.

Bimmer Plug, Irvine – Shopify Developer Intern *February 2025 - August 2025*

- Improved page load performance by 40% by engineering API-driven product pages with the Shopify Storefront API for a 700+ SKU catalog, enabling dynamic personalization.
- Reduced inventory update errors by 85% by automating backend workflows with the Shopify Admin API and integrating validation pipelines.
- Handled 1,000+ concurrent customer interactions by developing a real-time chat system using Node.js and WebSockets with optimized event handling.
- Reduced deployment time by **60%** through GitHub Actions **CI/CD automation** for builds and releases.

Open Source Contributor – AsyncAPI *(Volunteer)* *June 2024 –December 2024*

- **Improved cross-language SDK reliability** by implementing new features and fixing core bugs in **JavaScript, TypeScript, and Go**, strengthening event-driven architecture tooling.
- **Reduced configuration errors by 30%** by enhancing **schema validation and documentation workflows**, accelerating developer onboarding and spec compliance.

Mission Kaizen, San Jose – Lead Project Developer *March 2023 – June 2024*

- Boosted program visibility and user engagement by **45%** by leading a **3-person engineering team** to design, build, and deploy the *Mission Kaizen* production website with a focus on responsive UI and seamless navigation.
- Reduced content update time by **70%** by developing a custom content management framework designed to support **3× projected growth**, enabling non-technical staff to efficiently manage dynamic content.

TECHNICAL PROJECTS

UCLA Research Gene Expression Data Analysis System (Tahoe-100M) Code

- Collaborated with **UCLA Undergrad researchers** to engineer a scalable Python system for processing and modeling **100M+ single-cell gene expression profiles** from the Tahoe-100M dataset.
- Built **data pipelines and machine learning models** for normalization, dimensionality reduction, and similarity-based comparison of expression patterns, enabling large-scale biological insight extraction.

FullStack Real-Time Chat System– Node.js, Socket.IO, JavaScript, Bootstrap Live

- Built and deployed a real-time customer chat platform using Node.js, Socket.IO, and Tailwind CSS, enabling instant support for Bimmer Plug customers, reducing response time by handling high inquiry volumes efficiently.

AutoFix Bug Fixer – Python Static & Runtime Analysis Tool –Python, AST, Pytest, Traceback Parsing Code

- Developed a Python CLI for static + runtime Pytest failure analysis using AST parsing and O(1) hash-map lookups, cutting triage time by 60% across **500+ test cases** and adding pattern-matching logic to auto-suggest fixes.
- Reduced traceback triage time by 60% across 500+ test cases; implemented pattern-matching AI logic to suggest fixes.

SKILLS

Languages: Python, C, C++, Java, JavaScript, TypeScript, Swift, SQL, Bash
Frameworks & Tools: React, Node.js, FastAPI, Docker, GitHub Actions, Socket.IO, Shopify Storefront API