ANTHONY LOPEZ

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NEW GRADUATE SOFTWARE ENGINEER: BACKEND, DISTRIBUTED SYSTEMS, AND APPLIED AI

EDUCATION

University of the Pacific, Stockton, CA — Expected May 2027
Bachelor of Science in Computer Science | GPA: 3.57 | Dean's Honor Roll
Coursework: Algorithms, Machine Learning, Systems and Networks, Network Security and System Administration, Statistics and Probability; In Progress: AI, Programming Languages, Computing Theory

TECHNICAL SKILLS

Languages: Python, Java, C++, Rust, TypeScript/JavaScript, React, SQL, Bash, R, MIPS Assembly
Backend and Systems: asyncio, concurrency, WebSockets, REST APIs, event-driven architecture
Data and AI: SQLite, Qdrant, SurrealDB, RAG, LLM orchestration, streaming speech-to-text/TTS
ML and Statistics: NumPy, pandas, scikit-learn, TensorFlow, neural networks, regression, ANOVA
Infrastructure: Linux, Docker, Cloudflare Workers/D1/R2, SSH deployment, observability, Git

PROJECTS

Bishop: Real-Time Multi-Speaker Voice AI | *Python, asyncio, SQLite, Qdrant* — 2024 - Present
Sole developer of a voice agent that joins live Discord calls, tracks who said what, and remembers across sessions; 50 modules and 31,600 lines of Python running continuously on a remote server.

- Engineered a real-time voice pipeline with per-speaker streaming speech recognition over concurrent WebSockets, turn detection, and barge-in handling inside a 6-second latency budget
- Architected a nine-store memory system over SQLite and Qdrant with write gates that reject bad data
- Fixed a silent retrieval bug where 82% of recalled memories matched the bot's name, not the topic
- Built observability for a host with no interactive debugging: decision traces, drift detection, a 15-metric statistical control chart, and a 1,400-check test suite per build

OTD: Private Music Streaming Platform | *React, TypeScript, Cloudflare* — 2026

- Architected a serverless platform serving ~509 tracks (4.5 GB) from the edge; 28 API routes, 584 tests
- Implemented RFC 9110 byte-range audio delivery (206/416/304, conditional requests)
- Designed fail-closed auth: pinned Cloudflare Access JWTs plus HMAC-signed invite cookies
- Built offline visualizations (hand-rolled FFT, tempo fitting) so iOS background playback keeps working
- Cut a 342 ms main-thread stall 28x by rewriting an $O(n^2)$ tempo scorer as a binary search

Percival: Statistical Betting Engine | *Python, SurrealDB* — 2026

- Calibrated wagering lines with Poisson models and 20,000-trial Monte Carlo simulation

Multiplayer Game Project | *Java, Git/GitHub, four-person team* — 2025

- Used branching, pull requests, and peer code review; owned the inventory and interaction systems

EXPERIENCE

CS Teaching Assistant | Silicon Valley Education Fdn., San Jose, CA — Summers 2025, 2026

- Taught intro CS on micro:bit hardware to 8 to 16 students per day; invited back for a second summer
- Co-presented lessons with fellow TAs and the lead instructor; coordinated classroom setup

Founder and Developer | California Sacred Lands, Stockton, CA — Aug 2021 - Present

- Run a candle business end to end: product, Amazon and Etsy storefronts, marketing, and fulfillment
- Vended at the Lodi Grape Festival and Pacific Powwow, selling about 150 candles per event

Freelance Audio Engineer | Self-employed — Dec 2019 - Present

- Mixed and mastered 10+ tracks released on Spotify; lead studio sessions of 5+ people

COMMUNITY

Volunteer, Stockton and Lodi USD; California Indian cultural events — 2019 - Present