

Johnathan Gossaye

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EDUCATION

University of California, Los Angeles

Los Angeles, CA

B.A. Computer Science & Linguistics; B.S. Cognitive Science

Expected June 2028

Coursework: Data Structures & Algorithms, C++, Computer Organization, Discrete Structures, Linear Algebra

PROJECTS

HQ: Personal Device Orchestration Platform TypeScript, Next.js, Tailwind, PostgreSQL, Supabase, ESP32

- Built the orchestration layer behind a fleet of devices, centralizing goals and check-ins in a single PostgreSQL store
- Cut per-device integration to zero with one authenticated command API shared by the ESP32 mirror and Telegram
- Removed schema migrations across 5 tables by storing pages, fields, and values as JSONB rows behind a GIN index
- Eliminated duplicate writes on webhook redelivery with a partial unique index, proven by 25 end-to-end DB checks

Chess Move Generator C++17, bitboards, data structures, CMake, CTest

- Built a legal chess move generator in C++ on bitboards, handling castling, en passant, pinned pieces, and promotion
- Proved correctness against published perft counts on 5 standard positions, including 119,060,324 nodes at depth 6
- Doubled throughput from 10.8M to 21.8M positions per second by replacing attack scans with bitboard lookups
- Wrote a perft harness of 27 depth checks across 5 positions under CTest, catching regressions after each change

EXPERIENCE

Bloom (NFC hardware startup, 60,000+ units sold, ABC's Shark Tank)

Westwood, CA

Software Engineer

June 2025 – August 2025

- Automated NFC encoding and validation for the 1,000+ cards shipped daily, catching mis-encodes before shipment
- Raised app-to-firmware pairing success 15% by isolating failure patterns into reproducible cases for engineering
- Cut delivery time 30% and held shipping errors under 2% with an internal fulfillment tool built on the Shopify API

J-Builds

Los Angeles, CA

Founder

August 2022 – Present

Custom PC building and hardware consulting business, 25+ machines delivered

- Built and sold 25+ custom PCs on \$3,000+ revenue, tuning BIOS and UEFI and validating each under thermal load
- Cut average build cost 12% by benchmarking component price-to-performance against each client's real workload

LEADERSHIP

Bruin Tank

Los Angeles, CA

Director

September 2024 – Present

- Direct the 2027 edition: applicant selection to 18 finalist teams, the venture capital panel, and a \$1,500 top prize
- Recruited Notion, Perplexity, and Arc as sponsors for a competition whose alumni raised \$26M+ and hit Shark Tank

TECHNICAL SKILLS

Languages: C++, Python, TypeScript, JavaScript, SQL, HTML/CSS

Tools & Technologies: React, Next.js, Tailwind, Node.js, PostgreSQL, Supabase, Git, Linux, CMake, Vitest, Shopify API