

ISHAAN SARASWAT

(925) 856-7802 | isaraswa28@ucla.edu

<https://github.com/ishaan1234567890> | <https://www.linkedin.com/in/ishaansaraswat28> | <https://ishaansaraswat.dev>

EDUCATION

University of California, Los Angeles (UCLA)

Bachelor of Science in Computer Science and Engineering

Los Angeles, CA

Expected June 2028

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Organization, Advanced Algorithms, Database Management Systems, Software Construction

EXPERIENCE

Shopify

Bellevue, WA

Machine Learning Engineer Intern

September 2026 - December 2026

- Developing backend and ML infrastructure for **Binks, Shopify's agent-scale automated code reviewer**, using Python, Go, and Rust, to improve engineering throughput and code-review scalability
- Reduced code-review cost by **~15%** by eliminating redundant analysis and model invocations while preserving review quality
- Implemented a **caching and deduplication layer** for repeated code-analysis requests, reducing median review latency by **~12%**, aiming for a 20% eventual latency reduction

IBM

San Jose, CA

Software Engineer Intern

June 2026 - September 2026

- Built automated verification systems for **IBM Watson Orchestrate** to evaluate collaborator-agent accuracy across **100+ enterprise workflow scenarios**, achieving **<200 ms validation latency**
- Hardened tool routing and external API execution, increasing end-to-end success rate by **~5%**
- Built scalable test infrastructure for autonomous workflows supporting **10,000+ daily agent invocations**

Shah Lab - UCLA

Los Angeles, CA

Undergraduate ML Research Assistant

September 2025 - March 2026

- Engineered ML pipelines to process **~500,000 microscopy frames** for embryo segmentation and computer-vision analysis
- Improved segmentation beyond a **95% accuracy baseline** through model optimization and analysis of computer-vision failures

App-Scoop

San Francisco, CA

Software Engineer Intern

June 2025 - September 2025

- Built a social-media automation platform using **transformer and scikit-learn models** to score post sentiment, increasing post engagement by **~40%**
- Developed React components and Node.js APIs for a scheduling dashboard, improving workflow productivity by **~20%**
- Containerized inference services with **Docker** and built GitHub Actions **CI/CD pipelines** for automated testing and deployment

PROJECTS

Distributed Vector Database | C++20, gRPC, Protocol Buffers, AVX-512 | [GitHub](#)

April 2026 - Present

- Built a distributed in-memory vector database in C++20 with **HNSW indexing** for approximate nearest-neighbor search over **768-dimensional embeddings**
- Implemented **AVX-512 SIMD distance kernels** with 64-byte aligned memory, achieving **<2 ms ANN search latency**
- Distributed inserts and queries across **3+ worker shards** using gRPC, Protobuf, and hash-based routing, sustaining **10,000+ QPS**

API Billing & Verification Gateway | Python, FastAPI, Next.js, Supabase, Gemini AI | [GitHub](#)

March 2026 - Present

- Built a **FastAPI reverse proxy** with SHA-256 token authentication, rate limiting, request fingerprinting, and usage-based billing with **<50 ms processing overhead**
- Designed an asynchronous verification pipeline using Gemini structured function calling to validate **10,000+ API responses** for hallucinations and data consistency
- Built a Next.js/TypeScript dashboard with Stripe Checkout and Supabase/PostgreSQL transactions, load-tested to **100,000+ micro-transactions**

[LiftCircle](#) | RAG, SwiftUI, Python, Firebase, Next.js, TypeScript

July 2025 - January 2026

- Built an AI coaching system using a **Python and RAG backend**, semantic chunking, and a curated evaluation dataset for personalized workout analysis
- Built the full-stack iOS product with **SwiftUI, Firebase, and Next.js**, including authentication, workout logging, and StoreKit subscriptions

SKILLS

Languages: C++, Python, Go, Java, Rust, TypeScript, JavaScript, SQL, Swift

Frameworks: React, Next.js, FastAPI, Node.js, PyTorch, TensorFlow, Django

Tools & Systems: AWS, Docker, GitHub Actions, gRPC, Protobuf, Firebase, Supabase, PostgreSQL