

Eric Kim

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EDUCATION

Rice University

GPA: 3.84

Bachelor of Science in Computer Science

May 2028

- **Coursework:** Data Structures & Algorithms, Computer Systems, Operating Systems, Object-Oriented Programming, Programming Languages, Probability & Statistics

EXPERIENCE

Uber

September 2026 – December 2026

Software Engineer Intern

Sunnyvale, CA

- Incoming intern on Uber's Compute Platform team, which runs Kubernetes orchestration for all Uber workloads.

eBay

May 2026 – August 2026

Software Engineer Intern

San Jose, CA

- Build Kubernetes operators and CRDs in Go to automate node lifecycle across a **100K+** node private cloud.
- Architect per-AZ Go collectors streaming Node, Pod, and PDB state from **40+** clusters via shared informers.
- Ship OS patch-compliance tooling with fleet-wide visibility, eliminating **10+** hours of weekly manual reporting.
- Deploy Elasticsearch poller enriching maintenance records with pod and PDB state across **3** passes every **2** min.

Air Alliance Houston

August 2025 – May 2026

Software Engineer

Houston, TX

- Architected real-time pollution pipeline in Python, cutting sensor-to-dashboard latency from **5min** to **sub-30s**.
- Built forecasting pipeline with daily retraining, replacing manual threshold alerts with **96%** accurate predictions.
- Introduced Redis caching with query batching, cutting dashboard load times by **60%** across **3K+** concurrent users
- Engineered partitioned PostgreSQL schema with composite indexes for **200K+** reads/day at sub-**100ms** p95.

UT Austin Oden Institute

May 2025 – August 2025

Software Engineer Intern

Austin, TX

- Built C++ ingestion service with lock-free queues, processing **50K** sensor events/sec at sub-**100ms** p99 latency.
- Built MVCC transaction layer in C++17 over RocksDB, sustaining **100K** TPS with snapshot isolation guarantees
- Built thread-safe sensor pipeline with concurrent producers and mutex-guarded state, cutting data loss to **<0.1%**.
- Parallelized model training across **8** GPUs with PyTorch DDP, achieving near-linear **8x** throughput improvement.

Scholarhive

October 2024 – January 2025

Founding Engineer

Houston, TX

- Scaled edtech platform to **5.5K+** users and **\$500K** in scholarship matches; selected for **YC W25 interview**.
- Reduced API p95 latency **85%** (**800ms** to **120ms**) via targeted SQL indexes and Redis caching on AWS.
- Increased apply rate **30%** by shipping Next.js discovery UI with server-side filtering and match rankings.
- Built Spark ETL in Java ingesting **50M+** records/day from **10+** sources, achieving **94%** match precision.

PROJECTS

GoCache | Go, RESP Protocol, Docker, Prometheus, TCP/Networking

github.com/erickim73/gocache

- Built distributed cache achieving **<1ms p99** latency at **50K+** RPS using LRU eviction and TTL expiration.
- Engineered B-tree storage engine with range scans, sustaining **200K+** ordered reads/sec at p99 **<2ms**.
- Implemented Raft-inspired leader election with automatic failover, promoting replicas within **5s** of node failure.
- Enabled near-linear horizontal scaling via consistent hashing, achieving **3.9x** throughput on **4** nodes.

OwlConnect | LangChain, FastAPI, MongoDB, WebSockets

devpost.com/software/owlconnect

- Won **2nd** place at HackRice 15 (**500+** participants) building AI mentor-matching platform for Rice students.
- Designed candidate generation pipeline over **500+** profiles via embeddings, hitting sub-**200ms** retrieval p99.
- Streamed real-time mentor recommendations via WebSocket + LangChain agents with **sub-2s** response times.
- Tuned **15+** LangChain agent prompts via custom eval harness, lifting task completion from **71%** to **92%**.

TECHNICAL SKILLS

Programming Languages: Python, Go, TypeScript, JavaScript, Java, C++, SQL, C

Frameworks: React, Next.js, FastAPI, Node.js, Flask, Django

Infrastructure: Kubernetes, Docker, PostgreSQL, RocksDB, Redis, AWS, GCP, MongoDB, Prometheus

AI/ML: PyTorch, NumPy, Pandas, Scikit-learn, Hugging Face