

KUNAL BHUJBAL

Software Engineer

✉ kunalbhujbal1111@gmail.com 📞 +1 (213) 505-1923 📍 San Francisco, CA 🔗 LinkedIn 📁 Portfolio 🏠 Github

Skills

Programming & Scripting: JavaScript (ES6+), TypeScript, Python, Java, C++, C#

Back-End Development: Node.js, Express.js, Spring Boot, RESTful APIs, GraphQL, Authentication & Authorization (OAuth2, JWT, Cognito)

AI & Machine Learning: LLM & RAG Integration, Gen AI, Data Pipelines, NLP, Pinecone, LangChain, Prompt Engineering, Computer Vision

Front-End Development: React.js, Angular, HTML5, CSS3, Bootstrap, Tailwind CSS

Databases: MySQL, PostgreSQL, MongoDB, Cassandra

Cloud & DevOps: AWS (EC2, S3, Lambda, Cognito), Docker, Kubernetes, gRPC, Kafka, Terraform, CI/CD (Jenkins, GitHub Actions),

Architecture & Tools: Microservices, Serverless, Git, Agile/Scrum, Jira **Collaboration:** Problem Solving, Performance Optimization

Professional Experience

Founding Software Engineer

Aug 2025 – Present | Middletown, DE

VibeSea AI Incorporated

- Led a team of 4 engineers in designing and building the mission-critical backend infrastructure for an anti-cheating app; scaled the initial system from zero to support 3000+ active users (candidates, interviewers, HR) across 20 companies.
- Architected and deployed 4 scalable, event-driven microservices (Python/FastAPI, TypeScript) to manage authentication, interview lifecycle, and notifications, ensuring 99% uptime for 1,000+ concurrent sessions.
- Engineered the high-throughput, real-time data pipeline for the core anti-cheating engine, processing 50 screenshots/min and 500 MB of OS logs per session, which was a critical component in securing \$500k Seed funding.
- Engineered the AI/LLM integration to automatically analyze visual and log data, generating violation summaries with 97% accuracy and reducing manual review time by 70%, directly improving operational efficiency.
- Developed the cross-platform Electron.js app for candidates to enable screen capture, log collection, and low-latency data transfer.

Software Engineering Intern

Jan 2024 – May 2025 | Los Angeles, CA

USC FPM

- Led a team of 7 developers in building a full-stack campus-wide asset management system (React.js, Node.js, MongoDB) for USC inspection officers, with interactive floor maps, reducing inspection reporting time by 35% and cutting asset lookup latency by 60%.
- Engineered critical field features, using IndexedDB including offline-first support (slashing delays by 40%) and QR code/photo annotation (accelerating documentation by 50%) and one-click generation of weekly, monthly, and annual reports.
- Implemented enterprise-grade security using SAML 2.0 for USC Shibboleth SSO and JWT-secured APIs for role-based access control.
- Automated API (Postman, REST Assured) and UI (selenium) testing to raise test coverage to 85% and cut regression bugs by 45%.

Software Engineer

Aug 2022 – Aug 2023 | Mumbai, India

Bank of America

- Architected and developed core Java Spring Boot microservices for Bank of America's DSAS internal cloud platform, using Spring Cloud Gateway to manage secure API routing and policy enforcement for platform-wide services.
- Implemented a fault-tolerant, event-driven architecture to process large-scale financial transactions, using Kafka Streams (to decouple services), circuit breakers (to prevent cascading failures), and Kubernetes readiness/liveness probes for high availability.
- Acted as a key technical liaison in a fast-paced Agile/Scrum environment, collaborating daily with QA teams to define test strategies and translating complex stakeholder requirements into actionable user stories.
- Received a **Golden Award** from the **Senior Vice President** of Digital Solutions team in the BACNet 2.1.3 release for resolving critical backend optimization of a core-system bottleneck in the real-time event stream, boosting message throughput by 40%.

Education

Master of Science (MS), Computer Science

Aug 2023 – May 2025 | California, USA

University of Southern California (USC)

Bachelor of Engineering, Computer Engineering

Aug 2018 – Aug 2022 | Mumbai, India

University of Mumbai

Projects

ShopSphere - ECommerce Microservice Platform [🔗](#)

- Architected a 13-service e-commerce platform using a Spring Boot microservices pattern handling the full user lifecycle from authentication and cart management to order processing and payment
- Implemented Spring Cloud (Eureka, Gateway, Config) to manage service discovery, API routing, and centralized configuration.
- Engineered a high-performance data layer by integrating Elasticsearch for product search, Redis for caching, PostgreSQL for persistence, and containerized all services using Docker.

Multi Agent AI Travel Advisor [🔗](#)

- Developed an LLM-powered multi-agent travel assistant using Llama 3.1 (70B) integrated with LangChain and LlamaIndex, enabling autonomous collaboration between specialized agents for itinerary planning, budget optimization, and real-time recommendations.
- Built a RAG-enhanced reasoning pipeline with FAISS vector search and OpenAI embeddings, using FastAPI backend and Next.js frontend incorporating contextual memory, dynamic user profiling, and real-time data retrieval for personalized and adaptive travel experiences.

StockVortex - Stock Market Simulator [🔗](#)

- Architected and developed simulated stock trading platform using a Node.js microservices backend; secured the API Gateway with JWT and used Kafka for asynchronous internal service communication between decoupled trade execution and portfolio updates.
- Containerized (Docker) all services (e.g., Auth, Trading, Portfolio) and deployed the multi-container application on a Kubernetes cluster for automated scaling; integrated MongoDB for persistence and utilized real-time Finnhub/Polygon APIs for market data.