

Karim Ladak

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EDUCATION

The University of Texas at Austin | Austin, TX

May 2025

B.S. Computational Biology | Computer Science Certificate | Entrepreneurship Minor | GPA: 3.9

Relevant Coursework: Software Design, Machine Learning, Data Structures & Algorithms, Distributed Systems Networking, Probability & Statistics, Data Science, Game Theory

EXPERIENCE

Precision Cardiology | *Health Tech Consultant* | **Houston, TX**

Aug 2025 - Present

- Advised a multi-site cardiology and oncology clinic on EMR workflow optimization, clinical data infrastructure, and technical strategy, translating operational needs into implementation priorities.
- Rebuilt web infrastructure and executed SEO strategy from launch, strengthening online visibility and patient acquisition channels.

Dubai World Trade Centre | *Biometric Systems Engineer* | **Dubai, UAE**

May 2025 - Jul 2025

- Built a real-time biometric monitoring system serving **4,000+ concurrent users** with event-driven microservices, auto-scaling, and multi-region failover on AWS for live event operations.
- Developed ETL pipelines with Kinesis stream processing and Redis caching, achieving an **80x throughput improvement** over the legacy polling architecture and reducing latency for downstream analytics.
- Maintained **99%+ uptime** across an eight-week live deployment with zero critical incidents.

Specialist Health | *HealthTech Product Intern* | **Austin, TX**

Aug 2024 - May 2025

- Built and shipped a multi-tenant healthcare SaaS platform in React and Node.js, implementing JWT authentication, input validation, and encryption controls for patient and referral workflows.
- Designed graph-based patient-to-specialist matching logic to automate referral routing and reduce manual review.
- Shipped **5+ user-facing features** through iterative product releases, incorporating stakeholder feedback into onboarding and workflow improvements.

Expedia Group | *Software Engineering Intern* | **Austin, TX**

May 2024 - Aug 2024

- Engineered Node.js and Java microservices processing **1M+ requests/day** through REST APIs and message queues with distributed tracing and circuit-breaker patterns across high-volume travel workflows.
- Deployed AWS/Azure infrastructure with Docker and Kubernetes, implementing CI/CD and observability tooling that cut latency **40%** and deployment cycle time **60%** through automated deployment and scaling.

Sysco | *Software Engineering Intern* | **Houston, TX**

Jun 2023 - May 2024

- Implemented AWS Lambda functions with DynamoDB integration, reducing data-processing costs **50%** while handling **100K+ daily transactions** across supply-chain workflows.
- Optimized PostgreSQL queries with indexing and query planning, achieving **3x faster response times** on revenue-critical dashboards used across 200+ branches.

PROJECTS

ClinicalRAG - *Python, LangGraph, FastAPI, ChromaDB, React*

- Built a clinical decision-support API grounding LLM responses in FHIR guidelines through LangGraph orchestration, ChromaDB retrieval, FastAPI services, and a React interface for clinical workflows.
- Implemented HIPAA-aware audit logging and retrieval-evaluation pipelines for structured clinical knowledge.

Syncura - *Python, SQL, React, TensorFlow*

- Trained a readmission-risk model on 20,000+ EHR records using interpretable machine-learning methods.
- Built a React dashboard, Python data pipelines, and REST APIs delivering real-time risk scores to clinical teams.

Harris Lab - Vesicle Segmentation - *Python, React, Deep Learning*

- Built an interactive React interface to visualize and compare outputs from deep-learning segmentation models trained on 10,000+ high-resolution neuroimaging datasets at UT Austin.

SKILLS

Languages: Python, JavaScript, TypeScript, Java, C++, C#, SQL

Frameworks & AI: React, Node.js, Next.js, FastAPI, TensorFlow, LangGraph, ChromaDB

Cloud & Data: AWS, Azure, GCP, Docker, Kubernetes, Terraform, PostgreSQL, DynamoDB, Redis, Kinesis

Practices: Distributed systems, microservices, event-driven architecture, CI/CD, RAG systems, EMR integration

INTERESTS

Backcountry Camping | Pickleball | Pakistani Cooking | International Backpacking | Rock Climbing | Fragrance Collecting