

Riyan Maknojia

Richardson, TX | riyanmak123@gmail.com | github.com/RiyanMak | linkedin.com/in/riyan-maknojia

EDUCATION

University of Texas at Dallas

Bachelor of Science in Computer Science

Richardson, TX

Aug 2024 – Dec 2026

Austin Community College

Associate of Science in Computer Science

Austin, TX

Aug 2022 – May 2024

EXPERIENCE

Full Stack Developer

Jun 2025 – Present

ACM UTD

Richardson, TX

- Collaborated with 5-person team to solve the challenge of limited accessible coding interview platforms, delivering globally-deployed system enabling 1000+ users worldwide to practice collaborative technical interviews with LeetCode problems
- Spearheaded authentication and session management system from the ground up using OAuth, supporting 500+ concurrent users and implementing Redis caching layer to ensure sub-second response times and reliable session persistence
- Architected backend migration strategy to leverage AWS services for future scalability, designing microservices infrastructure to support horizontal scaling and cloud-native deployment patterns for 10x user growth

Undergraduate Student Researcher

Feb 2025 – May 2025

ACM UTD

Richardson, TX

- Addressing critical limitations in assistive technologies by developing “YOLO,” an AI system that provides intent-aware scene descriptions with memory capability to help visually impaired users navigate independently
- Implemented STTran transformer architecture to generate structured scene graphs and engineered G-Retriever with GNN integration to enable natural language querying of visual environments
- Achieved 81.25% test accuracy on Graph QA dataset with 92.16% reduction in loss, creating a system that delivers contextually rich, queryable descriptions of surroundings

PROJECTS

BSG: Real-time Collaborative Coding Platform

Feb 2025 – Present

- Engineered 3-tier microservices architecture: Central Service (Express.js + Passport.js for JWT-based authentication and RESTful APIs), RTC Service (Gorilla WebSockets for real-time communication), Worker Service (Docker containerization for isolated code execution)
- Implemented Redis caching layer for session management and query optimization, React frontend with real-time collaboration features, and distributed system supporting 100+ simultaneous sessions with sub-100ms synchronization latency
- Developed Chrome extension using Manifest V3 APIs, architecting content script injection for DOM manipulation, service worker background processes for persistent connections, and cross-origin communication to integrate 2,000+ LeetCode problems

NeuroCam: Neurological Disorder Detection System

Feb 2025 – May 2025

- Built Flutter mobile application with Python backend using PyTorch, MediaPipe, and OpenCV; trained CNN on RaFD dataset analyzing 460+ facial landmarks for neurological disorder detection
- Created specialized detection pipeline for Parkinson’s (micro-tremor analysis), Alzheimer’s (saccadic eye movement tracking), and Multiple Sclerosis (hemifacial spasms), achieving 75% accuracy with real-time on-device processing

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, JavaScript/TypeScript, HTML, CSS, SwiftUI, Golang, SQL

Frameworks & Libraries: React, Express.js, Passport.js, PyTorch, MediaPipe, OpenCV, Next.js

Developer Tools: Git, GitHub, Jupyter Notebook, Google Colab, Docker, Redis, EC2, AWS Lambda

AI/ML: CNN, Computer Vision, Facial Recognition, Scene Graph Generation

ACCOMPLISHMENTS

Scale AI Hackathon First Place (2023): LLM response aggregation system

AWS Cloud Technical Essentials Certification (2026): EC2, S3, DynamoDB, ECS, Lambda, VPC, CloudWatch

Coursera Neural Networks & Deep Learning Certification (2023): TensorFlow, ML, Deep Learning