SAMEEP SHAH

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EDUCATION

Bachelor of Science in Computer Science — Expected May 2026
Texas Christian University | GPA: 3.95 — Fort Worth, TX

- Double Major in Economics, Minor in Mathematics
- **Coursework:** Data Structures, Algorithms, Programming Languages, Computer Architecture, Mathematical Statistics, GPU Computing, Software Engineering
- **Honors/Awards:** Clark Society Scholar, Upsilon Pi Epsilon, 7x Dean's List, 3x TCU Scholar, 90% Merit Scholar
- **Leadership:** Student Government Association, FinTech Club, Teaching Assistant, Resident Assistant

TECHNICAL SKILLS

Languages: Python, TypeScript/JavaScript, Golang, Java, Swift, SQL, C/C++
Frontend: React, React Native, Vue, TailwindCSS
Backend: Node.js, FastAPI, ASP.NET Core, PostgreSQL, gRPC, RESTful APIs
Tools: Git, AWS, Docker, Firebase, Jenkins, Supabase
AI/ML: LangChain, Semantic Kernel, RAG, Vector Databases (Qdrant), PyTorch

EXPERIENCE

Software Engineer — Aug 2025 – Present
The Center for Cancer & Blood Disorders — Fort Worth, TX

- Leading 6-member team building full-stack QA platform for medical linear accelerators across 4 sites, processing 150,000+ data points with sub-second query performance using React, ASP.NET Core, and PostgreSQL.
- Architected hybrid backend with ASP.NET Core API and Python ETL pipeline, implementing real-time file monitoring to automatically process machine logs.
- Deployed centralized PostgreSQL instance with OAuth 2.0 on shared network, enabling 20+ users across 4 facilities to access compliance data and generate reports, reducing report generation time by 93.3%.

Software Engineering Intern — Jun 2025 – Aug 2025
CBRE — Richardson, TX

- Developed scalable backend services using Python and Golang with gRPC APIs for enterprise platform serving 20,000+ users, deployed on AWS with CI/CD pipelines through Jenkins.
- Built AI-powered agent using Microsoft Semantic Kernel with autonomous tool-calling capabilities, reducing manual workflows by 40% through automated data visualization and business intelligence features.
- Engineered microfrontend architecture components integrated with real-time WebSocket communication system handling 1,000+ concurrent connections with sub-100ms latency, featuring speech-to-text functionality.
- Collaborated with cross-functional teams in agile environment, participating in code reviews and delivering features from design to production deployment.

AI/ML Research Assistant — May 2024 – May 2025
HealthLit Research Lab — Published Research | Fort Worth, TX

- Built production Retrieval-Augmented Generation application using locally hosted LLMs and LangChain, processing 500+ documents with 95% accuracy for healthcare audit automation.
- Architected fullstack application with React frontend and Python backend, integrating vector database (Qdrant) for semantic search across 10,000+ embeddings with sub-200ms retrieval times.
- Co-authored peer-reviewed research, presented at IEEE/ACM CHASE 2025, and received Best Paper Award at IMNS 2025 conference.

PROJECTS

Sidequest - Gamified Grocery Coordination App | *React Native, TypeScript, Swift, PostgreSQL* — GitHub

- Built iOS application with React Native and Expo, developing custom Swift native modules for on-device OCR using Apple Vision Framework to automate receipt parsing and cost splitting.
- Architected cloud-native backend with PostgreSQL handling real-time synchronization, geofencing notifications, and RESTful APIs, deployed to TestFlight.

Puckle - Daily NHL Puzzle Game | *React, TypeScript, Node.js, PostgreSQL* — Deployment Link | GitHub

- Engineered fullstack web application with React frontend and Node.js backend, serving 35+ daily users with optimized PostgreSQL queries achieving sub-50ms response times.
- Designed daily puzzle rotation system with automatic midnight resets, achieving 78% daily return rate through engaging game mechanics.

ExRx AI - Cardiac Rehabilitation Agent | *Python, LangChain, PyTorch, RAG* — GitHub

- Building agentic AI system with UT Southwestern using RAG and LLM-powered workflows to generate personalized exercise prescriptions, reducing clinician planning time from 20 minutes to under 2 minutes.
- Designed multi-step reasoning architecture with retrieval, processing, and action capabilities for complex medical guideline interpretation and patient-specific recommendations.