

NIYAZ NABI

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Professional Summary

Full-Stack Software Engineer with 3+ years **building scalable web applications and microservices architecture**, expertise in Python, JavaScript, React.js, and cloud technologies. Proven track record of improving system performance by 40%+, processing 100GB+ datasets, and delivering production systems serving 1,000+ users with 99.9% uptime. Seeking Software Development Engineer roles to leverage expertise in building high-performance, enterprise-grade applications.

Education

University of North Texas

Master's in Advanced Data Analytics

GPA: 3.8/4.0

Relevant Coursework: Data Analytics, Data Harvesting, Storage, and Retrieval, Application Deployment

Gitam University

Bachelor's in Computer Science

GPA: 8.68/10 (equivalent to 3.5/4.0)

Relevant Coursework: Software Engineering, Web Development, Database Management Systems (DBMS)

Technical Skills

PROGRAMMING LANGUAGES : Python, JavaScript, TypeScript, SQL, C

WEB DEVELOPEMENT: React.js, Next.js, Vue.js, Node.js, Express.js, Flask, FastAPI, HTML5, CSS3

BACKEND DEVELOPMENT: RESTful APIs, Microservices Architecture, Server-Side Rendering

DATABASES: PostgreSQL, MongoDB, SQLAlchemy, Vector Databases, BigQuery, Snowflake, Database Optimization

REAL-TIME TECHNOLOGIES: WebSockets, Redis, Server-Sent Events (SSE)

CLOUD & DEVOPS: AWS, Google Cloud Platform (GCP), Docker, CI/CD Pipelines, Containerization

BIG DATA & ANALYTICS: Hadoop, Apache Spark, ETL Pipelines, Data Processing, OpenRefine

DATA VISUALIZATION: Tableau, Power BI, Interactive Dashboards, Analytics

DEVELOPMENT TOOLS: Git, Postman, Docker, Redis Clustering, Load Balancing

Work Experience

University Of North Texas

May 2025 – Present

Research Assistant

US

- Architected MathRAG learning platform using **FastAPI, Next.js, and MongoDB vector database**, reducing development time by **60%** through modular component architecture and processing 10,000+ mathematical queries daily with **95%** accuracy.
- **Engineered production-grade RAG pipeline with microservices design patterns and advanced feature engineering**, achieving sub-200ms response times and supporting 200+ concurrent users in **real-time chat interface**.
- Optimized **semantic search performance by 40%** across 50,000+ mathematical documents while **implementing Docker containerization and automated CI/CD**, reducing deployment time by **70%** with zero-downtime releases.
- Built scalable **vector database architecture enabling efficient document retrieval and real-time streaming with Server-Sent Events (SSE) technology**.

Solutions Now

January 2025 – May 2025

Data Analyst Intern

US

- Developed high-performance **data processing applications using Python (Pandas, NumPy)**, processing **1M+ records** daily with **35% system performance improvement** through algorithm optimization.
- Created 15+ interactive analytics dashboards integrating **Tableau with Snowflake**, serving 200+ stakeholders with real-time data visualization and business intelligence reporting
- **Engineered automated ETL pipelines with modular Python architecture**, reducing manual processing time by 50% and enabling seamless data flow between systems .
- Implemented real-time streaming data solutions handling 10GB+ daily data volume with 99.9% uptime while **optimizing database queries and data structures, resulting in 45% faster data retrieval and enhanced system scalability for enterprise-level applications**

- Designed and developed a **SaaS product** and **full-stack applications** for **data science** initiatives, delivering **modular** and **maintainable code** that significantly reduced development time.
- Enhanced frontend responsiveness and backend **scalability** using **Next.js**, **TypeScript**, **JavaScript**, **Tailwind CSS**, and **Express.js**, leading to a **40%** improvement in application performance.
- Engineered a robust **RESTful API** using **Flask**, facilitating seamless data integration, which improved data **retrieval speed by 25%** and supported real-time analytics for over 100 users in varying departments.
- Implemented automated testing and **deployment pipelines**, achieving **85% code coverage** and reducing production bugs by 60% through continuous integration practices

Projects

Realtime Chat Engine

WebSockets, Redis, Node.js, Express.js, React.js

Scalable Real-Time Communication Platform

- **Architected scalable messaging platform** supporting 1,000+ concurrent users with sub-100ms latency using WebSockets and Redis Pub/Sub architecture
- Engineered **horizontal scaling solution** with multiple **WebSocket servers** and **load balancing**, achieving 99.9% uptime and handling 10,000+ messages per second during peak loads
- Implemented **microservices architecture** with **Redis clustering** for session management, reducing server **response time by 60%** and enabling seamless cross-server communication
- Built responsive **React.js** frontend with **real-time UI updates** and **optimized rendering**, improving user engagement by **45%** across multiple devices.

Traffic Crash Analysis

Hadoop, Apache Spark, PostgreSQL, GCP, BigQuery, OpenRefine

Traffic Crash and Vehicle Insights Project

- Developed **big data processing pipeline** analyzing 5M+ traffic crash records using **Hadoop** and **Apache Spark**, achieving **75% faster query performance** compared to traditional SQL approaches.
- Engineered **cloud-based data architecture** on **GCP** with **PostgreSQL** and **BigQuery** integration, supporting 50+ concurrent users with real-time analytics capabilities.
- Implemented **advanced ETL** workflows using **OpenRefine** and custom pipelines, improving data quality by **85%** and reducing **manual cleaning time by 70%**.
- **Created predictive analytics dashboard** with machine learning models, identifying 200+ high-risk zones and reducing accident prediction errors by 40%