**RISHI NAIDU**

Dallas, TX

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Motivated Computer Science undergraduate with experience in full-stack development, AI-driven applications and distributed systems. Skilled in React, Python, AWS, and AI/ML with a passion for problem-solving and innovation. Seeking opportunities to apply technical skills in Application Development, Cloud, Automation or AI.

**EDUCATION**

UTD (University of Texas at Dallas)

Bachelor’s in science, Computer Science

*Expected Graduation*: May 2026

**Technical EXPERIENCE**

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| **Programming Languages** | Python, C/C++, Java, SQL, Node JS |
| **Web & JS Frameworks** | React, JavaScript, HTML/CSS |
| **Databases** | MySQL, PostgreSQL, SQLite |
| **Cloud**  | AWS Services ( S3, EC2, Sage Maker) |
| **ML Frameworks & Tools** | TensorFlow, gRPC, OpenCV |
| **Generative AI** | LangChain, , OpenAI, StreamLit, Chroma DB |
| **Developer Tools** | Git, Docker, Visual Studio, VS Code, PyCharm, IntelliJ, Eclipse, Protobuf |

**project Experience**

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| **Project # 1** | **Retrieval-Augmented Generation (RAG) Assistant | Fall 2024** |
| **Project Details** | Developed a Retrieval-Augmented Generation (RAG) assistant that enables users to query content extracted from PDF documents, leveraging vector stores and embeddings for efficient information retrieval. |
| **Technologies** | * Langchain
* GPT 4 LLM
* Chroma DB
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| **Responsibilities** | * Designed and implemented a GenAI-powered assistant using Python, LangChain, OpenAI GPT models, and Chroma for vector storage.
* Integrated embeddings and vector search to enhance contextual understanding and improve response accuracy.
* Built an interactive user interface using Streamlit for seamless user experience and real-time querying.
* Optimized retrieval pipelines to ensure efficient indexing and querying of PDF-based content.
* Applied prompt engineering techniques to generate accurate and context-aware responses.
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| **Project # 2** | **Music Genre Classification Application – AIM UTD Club | Fall 2024** |
| **Project Details** | Developed a machine learning-based application that classifies music genres from audio files using deep learning techniques. |
| **Technologies** | * Python, TensorFlow, Librosa
* React, JavaScript
* AWS (EC2, S3)
* GitHub (Version Control)
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| **Responsibilities** | * Implemented a Convolutional Neural Network (CNN) model with TensorFlow and Librosa for feature extraction and classification.
* Designed and built a React-based interface for seamless audio file uploads and real-time genre classification results.
* Managed version control and collaborative development using GitHub.
* Deployed the application on AWS, leveraging EC2 for computation and S3 for scalable storage.
* Optimized data preprocessing and model inference to improve classification accuracy and response time.
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| **Project # 3** | **Distributed Systems Key-Value Store | Mar 2023 – Jun 2023** |
| **Project Details** | Developed a scalable key-value store leveraging distributed systems principles to ensure efficient and fault-tolerant data storage and retrieval. |
| **Technologies** | * Python, gRPC, Protobuf
* Distributed Systems Architecture
* Docker (Containerization)
* Leader Election, Replication Protocols
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| **Responsibilities** | * Designed and implemented a distributed key-value store using Python, ensuring high availability and fault tolerance.
* Integrated gRPC and Protobuf to enable efficient and low-latency communication between microservices.
* Implemented leader election and replication protocols to maintain data consistency and integrity.
* Containerized the system using Docker, enabling scalable and maintainable deployment across environments.
* Optimized request handling and load balancing to enhance performance under high traffic conditions.
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| **Project # 4** | **Social Media Sentiment Analysis | Oct 2022 – Feb 2023** |
| **Project Details** | * Developed a sentiment analysis web application to classify social media posts as positive, negative, or neutral using NLP and deep learning.
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| **Technologies** | * Python, TensorFlow (Deep Learning, NLP)
* Flask (Backend API)
* React (Frontend)
* AWS (Cloud Deployment)
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| **Responsibilities** | * Built a deep learning model using TensorFlow for sentiment classification of social media posts.
* Developed a Flask-based REST API to handle text input and return sentiment predictions.
* Designed an interactive React frontend for seamless user interaction and real-time sentiment visualization.
* Deployed the application on AWS, ensuring scalability and efficient processing of large datasets.
* Optimized text preprocessing techniques, including tokenization and embedding, to improve model accuracy.
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| **Project # 5** | **AI Face Detection Application | Sep 2021 – Nov 2021** |
| **Project Details** | Developed a face detection application using OpenCV to detect and recognize human faces in real-time. |
| **Technologies** | * Python, OpenCV (Computer Vision)
* PyCharm (Development Environment)
* Image Processing, Facial Recognition
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| **Responsibilities** | * Implemented OpenCV-based face detection algorithms to identify human faces in images and video streams.
* Gained hands-on experience with computer vision techniques and real-time image processing.
* Configured and managed PyCharm environment, including dependency installation and debugging.
* Experimented with facial recognition features, enhancing understanding of feature extraction and classification.
* Optimized detection accuracy by tuning model parameters and applying image preprocessing techniques.
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**leadership experience**

**Vice President, Minecraft Java Edition Club | University of Texas at Dallas | Fall 2024**

Led and managed club activities, fostering a collaborative and engaging community for over 100 members.

**Responsibilities:**

* Organized and hosted weekly Minecraft events, including collaborative building projects and in-game competitions to enhance teamwork and problem-solving skills.
* Managed and maintained the club’s dedicated server, ensuring smooth gameplay, troubleshooting technical issues, and optimizing performance.
* Spearheaded membership growth efforts, increasing engagement by 20% through strategic social media promotions and interactive club activities.
* Facilitated community engagement, fostering an inclusive and creative environment for players of all skill levels.
* Coordinated with club leadership to plan and execute special events, tournaments, and guest speaker sessions on game development and modding.