

Sai Raghavendra Maddula

Phone - +1(940)843-3560

Email - raghudo888@gmail.com

Blog - <https://myblogspott.com>

LinkedIn - www.linkedin.com/in/sairaghavendramaddula

GitHub - <https://github.com/Myblogspott>

Address - Richardson, TX

SUMMARY

Enthusiastic **Computer Science and Information Technology professional** seeking a challenging position in the **United States**. With a proven track record of developing and deploying **10+ AI/ML projects from scratch to production within a month**, I have consistently delivered high-quality solutions, earning **praise from 15+ satisfied clients** for my **strong communication and analytical skills**. Specializing in **Generative AI, AI Agents, and DevOps**, I have successfully built **Agentic AI-powered chatbots** using **AutoGen, CrewAI, and OpenAI Transformers**, integrating them into **real-world applications** for automation and intelligent decision-making. My expertise extends to **streamlining workflows with DevOps practices**, ensuring **scalability, efficiency, and automation** in AI-powered systems. I am eager to **apply my technical expertise, problem-solving abilities, and strategic thinking mindset** to contribute to impactful AI-driven projects within a **dynamic and collaborative team environment**.

Technical Skills

- **Programming Languages:** Python, Java, JavaScript, C++
 - **Web Technologies:** HTML, CSS, React, Node.js, Flask, Axios, SaaS
 - **DevOps & MLOps:** Docker, Kubernetes, Jenkins, Ansible, Terraform, AWS (including AWS Amplify), Azure DevOps
 - **Cloud Technologies:** AWS (EC2, S3, Amplify, Cognito and Elastic BeanStalk), GCP (Vertex AI, Gen AI Studio, DialogFlow CX, AutoML Natural Language) Azure (Databricks, App service, Azure Kubernetes Service (AKS) and Virtual Machines)
 - **Machine Learning & Gen AI:** NLP, AI model deployment techniques, Model Training, Model Fine Tuning, Deep Learning, RAG, Transformers .
 - **Agentic AI:** AutoGen, CrewAI, LangGraph, OpenAI Terraform and iAC.
 - **Cloud Services:** AWS, Google Cloud APIs, Google Analytics, EC2, S3 Bucket and GCP.
 - **Data & Big Data Technologies:** MySQL, MongoDB, PostgreSQL, Linux, Hadoop, Hive, Vector Databases (FAISS, ChromaDB and Pinecone), SQL
 - **Data Engineering & Pipelines:** Git CI, Data Ingestion pipelines
 - **Security & Authentication:** OAuth 2.0, AWS Cognito
 - **SEO Optimization:** Implementing strategies to boost online visibility and performance
 - **Other Tools:** Git, JIRA, Prometheus, Grafana, SEO optimization techniques, Software Design (Agile, SDLC Methodologies).
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Work Experience

Microsoft learn Intern

Hyderabad, India | June 2020 – July 2021

- Built and **deployed relevance** models for **personalized recommendation systems** using **NLP** and **data mining techniques**.
- Developed CI/CD pipelines leveraging **Azure DevOps** and Jenkins to ensure seamless deployment.
- Automated infrastructure provisioning using **Ansible** and **Terraform**, improving scalability.
- Designed scalable and reliable cloud architectures using **AWS (EC2, S3, EBS)**.

Projects

Project -1: Scorify AI

Technologies Used – HTML, CSS, Python.

Machine Learning and AI - OpenAI, Google Vision API Integrations. Model Fine-Tuning.

Deployment - Google Cloud Deployment and GitHub Pages.

Links - [GitHub](#)

Scorify is an advanced **AI-powered application** designed for interactive learning, test preparation, and real-time question detection. It leverages cutting-edge technologies, including **Google Vision API**, **OpenAI GPT-4**, and **browser-based SpeechRecognition**, to deliver a comprehensive and intuitive learning experience.

Key features include **OTP Validation**, **Interactive Reading**, **Interactive Listening**, and **Live Feed AI**. The **OTP Validation** module ensures **secure authentication** with API-based validation, real-time countdowns, and alerts. The **Interactive Reading** module extracts text from images or live feeds using **Google Vision API** and generates precise responses via **GPT-4 fine-tuned models**, ideal for exams like Duolingo. Users can upload images, detect text, and hear AI-generated answers using **speechSynthesis** for audio output.

The **Interactive Listening** module processes user audio through the **SpeechRecognition API** to provide real-time topic insights, dynamic AI-generated hints, and practice for speaking exams. Unique features include **context-based hint generation** and summarization prompts like "Summarize the topic into 75 seconds." The **Live Feed AI** hub integrates all Scorify functionalities, enabling seamless transitions between modules.

Built with **HTML5**, **CSS3**, **JavaScript (ES6)**, and **Bootstrap 5**, Scorify provides a responsive and engaging user interface. The **technology stack** also includes APIs like Google Vision for text detection and OpenAI GPT for context-based answer generation. It supports **speech-to-text transcription**, **text-to-speech responses**, and real-time performance enhancement.

Project -2: Zeez AI

Technologies Used - HTML, CSS, Python, JavaScript.

Machine Learning and AI - OpenAI Integration, Model Fine-Tuning, LangChain.

API - Flask, Axios.

Cloud Services - AWS EC2, S3 Bucket

Securities - OAuth2.0, AWS Amplify.

Links - [GitHub](#)

Developed **Zeez AI**, an AI-powered platform delivering innovative solutions for **interactive learning, exploration, and assessment**. Leveraging technologies like **OpenAI**, **Google Vision API**, **AWS Amplify**, **LangChain**, and **Flask**, the platform offers a seamless and intelligent user experience.

Key features include **Image-to-Text Conversion**, enabling accurate, multi-language text extraction using **Google Vision API** and **OpenAI**, and **Text-to-Speech**, powered by **LangChain's chat framework** for natural audio responses. The **Custom Quiz Generation** module creates personalized quizzes based on user input, while **Research a Topic** utilizes **OpenAI LLM** for faster chatbot responses and efficient text extraction.

Zeez AI employs **React Router** for smooth navigation, **AWS Amplify** for secure authentication, and **Axios** for reliable **API communication**. The backend, powered by **Flask**, ensures robust data flow, while its **intuitive UI/UX** delivers a responsive design across devices.

Project -3: LingoMate AI

Technologies Used - Python, JavaScript, Node.js, Flask.

Machine Learning and AI – Custom Generative AI models for multilingual interaction and sentiment analysis.

Deployment – Local Python/Node.js environment with extensibility for cloud hosting.

Links - [GitHub Repo](#)

LingoMate AI is an **Agentic AI-powered, generative AI-driven multilingual chatbot** designed to deliver **intelligent, context-aware responses** based on website content. Supporting **Hindi, English, or a blend of both**, it also ensures various tasks that integrate **seamless human handover** for complex queries and adapts replies using **sentiment analysis** to align with user emotions.

Used **OpenAI Transformers** that leverages **Agentic AI capabilities** to autonomously handle conversations, optimize interactions, and enhance engagement. The bot **maintains context retention** for **coherent, multi-turn conversations** and tracks user interactions through **analytics for continuous improvement**.

For more projects, please navigate to this link [here](#).

Publications

Robust Azure CI/CD for Seamless Software Delivery

Sai Raghavendra Maddula

Published in the Proceedings of the IESTOC 2023 Conference, Christian Brothers University, Memphis, TN, USA.

Description: Focused on automating deployments, optimizing processes, and minimizing manual interventions to improve DevOps collaboration. Demonstrated Azure CI/CD pipelines for efficient microservices management and deployment to Azure Kubernetes clusters.

Project: Robust Azure DevOps CI/CD Automation for Django Application

Sai Raghavendra Maddula

Capstone Project, Christian Brothers University, Summer 2024.

Description: Implemented a CI/CD pipeline for Django applications using Azure DevOps, Docker, and Kubernetes. Enhanced operational efficiency and adaptability with an automated workflow for deployment and testing.

EDUCATION

- Master's in Computer Science, Christian Brothers University, Memphis, TN, USA - Graduated on Dec 2024 with a 4.000 GPA
 - Bachelor's in Computer Science and Engineering, KL University, AP, India – Graduated on 2022 with a 7.5/10.00 GPA
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