RAKSHITH G

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EDUCATION

Global Academy of Technology — Sep. 2021 – July 2025
Bachelor of Engineering in Electronics and Communication Engineering — *Current CGPA: 7.12*

Mangalore Independent PU College — Jun 2020 – Jul 2021
Physics, Chemistry, Mathematics, and Computer Science — *Percentage: 75*

EXPERIENCE

Artificial Intelligence Engineer Intern - ***Oct 2024 – Jan 2025***

Excentrix Ventures Pvt. Ltd.

- Designed and implemented ML models to enhance predictive analytics and automate workflows.
- Leveraged LangChain to build and optimize LLM-based models and Generative AI for advanced AI solutions.
- Engineered a conversational AI solution with a database for dynamic query responses, enhancing user engagement.
- Implemented NLP algorithms to improve the AI system's understanding of user queries, enabling personalized and context-aware responses.
- Conducted comprehensive testing to ensure model accuracy and reliability, improving system performance and reducing errors.

PROJECTS

- **HEART FAILURE PREDICTION AND CLASSIFICATION USING MACHINE LEARNING ALGORITHM AND EXPLAINABLE AI**

Tools : Scikit-learn, TensorFlow, Pandas, NumPy, Matplotlib, SHAP, LIME

- Built a machine learning model using Scikit-learn and TensorFlow to predict and classify heart failure cases, enabling early detection and improving patient outcomes.
- Implemented SHAP and LIME techniques to provide interpretability, allowing for better understanding of model decisions and enhancing trustworthiness in medical predictions.
- Applied data cleaning, normalization, and feature engineering techniques to optimize model accuracy and reduce biases, improving overall predictive performance.
- **PRECISE DETECTION AND CLASSIFICATION OF CATARACT EYE USING(CNN) BASED DEEPLEARNING ALGORITHM**

Tools : TensorFlow, Keras, OpenCV, NumPy, Pandas, Matplotlib

- Developed a convolutional neural network (CNN) model to accurately detect and classify cataracts from eye images, facilitating early diagnosis and medical intervention.
- Collected, labeled, and preprocessed large eye image datasets using OpenCV and Pandas, ensuring high-quality input for effective model training.
- Trained and fine-tuned the CNN model using advanced hyperparameter optimization, achieving high detection accuracy and reducing false positives.
- **JOB RECOMMENDATION AGENT USING AI**

Tools: FastAPI, Streamlit, LangChain, Google Gemini API, MongoDB, Python,RAG (Google Search Engine)

- Developed an AI-driven platform using FastAPI and LangChain to deliver personalized job suggestions, integrating Google Gemini API for real-time job data aggregation.
- Implemented a user-friendly Streamlit interface with chatbot-based job assistance, providing seamless user interactions and efficient job retrieval.
- Optimized job recommendations by employing natural language processing (NLP) for keyword extraction, regex-based filtering, and Retrieval-Augmented Generation (RAG) using Google Search.
- **QUESTION BANK GENERATOR TOOL USING BLOOM'S TAXONOMY**

Tools: Streamlit, Python,OpenCV, (PyMuPDF, LangChain, GoogleGenerativeAI), Bloom's Taxonomy

- Created a web-based application that extracts text from PDF documents and generates educational questions aligned with Bloom's Taxonomy using the Google Gemini API.
- Designed prompts to generate questions across Bloom's cognitive levels—knowledge, comprehension, application, analysis, synthesis, and evaluation—ensuring comprehensive educational coverage.
- Utilized PyMuPDF for efficient PDF parsing and LangChain to enhance output precision, ensuring accurate text extraction and generation

- **SMART RECRUITMENT PLATFORM USING AI - WORKWISE**

Tools : HTML, CSS ,TypeScript, React (Vite) , Node.js, Express, Gemini API, MongoDB, Docker , FireBase

- Built an end-to-end recruitment system using React (TypeScript) for the frontend and Node.js with Express for the backend, automating resume analysis, interview scheduling, and candidate shortlisting.
- Implemented Gemini models to generate custom interview questions based on job descriptions and analyze candidate resumes using advanced NLP techniques, enhancing the accuracy of job matching.
- Dockerized the platform's services (frontend, backend, AI models) and deployed on GCP
- **AI-DRIVEN ACADEMIC DATA ASSISTANT**

Tools: Python, streamlit, FastAPI , Guardrails, SQL, FAISS, LangChain, Hugging Face Transformers

- Built an AI-powered system using FastAPI to efficiently query and manage school-related data, enabling seamless access to student records, performance metrics, and administrative insights.
- Implemented Guardrails AI for robust input validation and response control, while utilizing FAISS Vector DB for efficient, similarity-based search and retrieval of large datasets.
- Integrated an SQL database for structured data storage and retrieval, ensuring high-speed access to school records while maintaining data integrity and performance.
- **YOUTUBE AUTOMATION TOOL**

Tools: Python, LangGraph, Google API Client, FastAPI , OAuth 2.0

- Built an AI-powered automation system using LangGraph to streamline video uploads to YouTube, enabling efficient management of video content, metadata, and upload processes.
- Implemented a structured workflow with LangGraph nodes for file validation, metadata preparation, and video uploading, leveraging the YouTube Data API for seamless integration with the platform.
- Integrated Google OAuth 2.0 for secure authentication and the Google API Client for reliable, high-speed video uploads, ensuring robust error handling and state tracking throughout the process.

TECHNICALSKILLS

Languages: C, C++, Python, Java, JavaScript, TypeScript, HTML, CSS
Web Dev Tools:NodeJS, ExpressJS, ReactJS, Basic Next.js, Flask, MERN Stack, FastAPI, Django, FireBase
Databases: MySQL, MongoDB
Cloud/Deployment: Docker, Vercel , Render , Mongo Atlas
AI & Machine Learning: Gemini, OpenAI,Langchain , Langgraph, Ollama, Llama 3.2,OpenCV , RAG,Vector DB, Guardrail AI , OpenCV
Tools & Technologies: Git, GitHub, Arduino
Operating Systems: Windows, Unix
Soft Skills: Problem Solving, Critical thinking, Self-learning, Communication skills, project ownership, troubleshooting, interpersonal, presentation skills, cross-functional, ethics, quick-learner

CERTIFICATION

Data Science using Python - IIT Madras
Machine Learning Course - IBM
Artificial Intelligence - Infosys
Python Foundation Certificate - Infosys
The Complete 2024 Web Development Bootcamp - Udemy
Git and GitHub – Microsoft
24 Hours Personality Development &communication Skill - Bizotic Edtech

ACADEMIC ACHIEVEMENT

- **Vice-Chairperson at IEEE ComSoc Student Chapter** at our college.
- **IEEE R10 ACEI Entrepreneurship Ambassador 2025** for **Bangalore Section.**
- I **conducted a workshop** on **Arduino, Git and GitHub Workshop under the TechConnect club**
- Presented a conference paper In **International Conference (ICATECS-2024) on heart failure detection utilizing explainable AI**
- **Exhibit Coordinator** for **Param Innovation at BIEC TIE Global Summit 2024**, explaining scientific concepts and innovations.
- **Assisted in organizing and managing an inter-college NEXUS hackathon**.
- Volunteered for **Youth for Seva NGO and PARSEC for 30+ Hrs.**