

KALIDAS VB

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PROFESSIONAL SUMMARY

Skilled Backend Developer with expertise in Python, FastAPI, and Django. Proficient in developing and optimizing API endpoints, implementing efficient data processing scripts, and integrating with various databases including MySQL, PostgreSQL, and vector databases like FAISS. Experienced in cloud platforms such as Google Cloud Platform (GCP) and Amazon Web Services (AWS). Demonstrated ability to create scalable solutions for healthcare applications and implement advanced features like Retrieval-Augmented Generation (RAG) systems.

TECHNICAL SKILLS

Languages: Python, Java, SQL, JavaScript, HTML, CSS, C++, Dart

Frameworks/Libraries: FastAPI, Django, Streamlit, PyTorch, Keras, LangChain, NumPy, Pandas, scikit-learn, Matplotlib

Tools: Git, GitHub, Jira, Kaggle, VS Code, Google Colab, Poetry, Docker, Google Cloud Platform (GCP), Amazon Web Services (AWS)

Databases: MySQL, PostgreSQL, FAISS Vector DB, Neo4j Graph DB

Soft Skills: Problem-solving, Teamwork, Communication, Adaptability, Time management

EXPERIENCE

AI Intern

July 2024 – Present

HealTether Health Pvt. Ltd

- Developed and optimized API endpoints using FastAPI for improved performance and scalability
- Engineered efficient Python scripts to automate data extraction and entry processes
- Created AI-driven solutions for differential diagnosis using advanced prompt engineering techniques
- Architected and implemented a hybrid Retrieval-Augmented Generation (RAG) system leveraging FAISS (vector DB) and Neo4j (graph DB)

Machine Learning Intern

May 2024 – July 2024

Dex AI Solutions

Dubai

- Engineered a mental health chatbot by fine-tuning LLaMA2 and LLaMA3 models using Hugging Face Transformers with PEFT and QLoRA
- Designed and implemented an advanced chatbot using OpenAI API, employing sophisticated prompt engineering for domain-specific applications
- Developed and deployed an MVP using Streamlit, creating an interactive and user-friendly interface

Data Science Intern

May 2022 – June 2022

KELTRON Ltd

- Conceptualized and implemented data science solutions to address complex business challenges
- Conducted comprehensive exploratory data analysis (EDA) on large-scale datasets
- Developed and trained machine learning models for both regression and classification tasks

IEEE Webmaster

January 2021 – December 2022

IEEE SCT SB

- Spearheaded the development and maintenance of the official IEEE SCT SB website and subcommittee sites using WordPress
- Orchestrated content updates, implemented new features, and ensured optimal website performance and user experience

PROJECTS

Resume Semantic Search Using RAG

Tools: FAISS, LangChain, Gemini, Cohere Reranker, Google Cloud Platform (GCP)

- Engineered a semantic search system for efficient retrieval of relevant resumes from large collections using FAISS and Hugging Face embeddings.
- Integrated LangChain for natural language query processing and implemented RAG for enhanced accuracy.
- Utilized Cohere reranker to significantly improve retrieval accuracy.
- Implemented features for highlighting search queries and generating summaries for top-matching resumes.

Botnet Detection Using Deep Learning

Tools: PyTorch, TensorFlow

- Designed and implemented a deep learning model for detecting botnet attacks from raw network traffic data.
- Achieved high accuracy in distinguishing between malicious and benign network traffic.
- Developed an intuitive user interface using Tkinter, mimicking antivirus software functionality.

Mental Health Chatbot

Tools: Hugging Face Transformers Library, PEFT, QLoRA

- Successfully fine-tuned LLaMA 2 and LLaMA 3 models using PEFT and QLoRA techniques for a specialized mental health chatbot.
- Enhanced chatbot performance through the implementation of advanced prompt engineering strategies.

YouTube Video Downloader

Tools: Django, Pytube, HTML, CSS, JavaScript

- Developed a full-stack web application for downloading YouTube videos, leveraging Django and Pytube.
- Implemented a user-friendly interface allowing video downloads in various formats.
- Successfully deployed and hosted the application using Vercel.

EDUCATION

Sree Chitra Thirunal College of Engineering

TVM, Kerala, India

Bachelor of Technology in Computer Science (Artificial Intelligence and Machine Learning)

2020-2024

- CGPA: 7.58
- IELTS : 8.5 Band

Saraswathi Vidyalaya

TVM, Kerala, India

Secondary School CBSE (Computer Science)

2020

- Grade: 90.4%