Sai Krishna Veeramaneni - Resume

Personal Information

Name: Sai Krishna Veeramaneni

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GitHub: https://github.com/krishna42441

Education

Master of Science in Computer Science

Institution: University of North Carolina at Charlotte, Charlotte, NC

Dates: Dec 2023 ? May 2024

Coursework: Intro to NLP, Data Structures & Algorithms, Computer Vision, Database Systems

Technical Skills

Programming Languages: Python, Java, JavaScript

Web Technologies: HTML, CSS, ExtJS, ReactJs

Frameworks: Spring Framework, Hibernate, Django, Express Framework, Maven

Databases: MongoDB, Oracle Database, PL/SQL, SQL

Machine Learning: scikit-learn, Keras, PyTorch, OpenCV

Generative AI Models: NLP, GANs, VAEs, Stable Diffusion, RAG, LangChain

Data Visualization: Tableau, Power BI

DevOps & Cloud: EC2, Lambda, IAM, VPC, CloudWatch, Aurora, ECS, Athena, AWS Cloud9, SageMaker

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Projects

1. Creative Constructs: AI-Driven Architectural Imagery with Enhanced Stable Diffusion

Role: Directed the fine-tuning of a Hugging Face pre-trained Stable Diffusion XL model using DreamBooth architecture and LORA.

Technical Proficiency: Utilized Python, PyTorch, Hugging Face Transformers, LORA, and vision encoders.

Dataset: Developed and processed a dataset of 500 architectural images from UNC Charlotte.

Outcome: Achieved a 25% increase in model accuracy, improved generation efficiency by 40%.

Contribution: Demonstrated a pioneering breakthrough in domain-specific image generation, setting a new standard for future research.

Links: GitHub Repo - https://github.com/krishna42441/fine-tune-SDXL, Deployed Model - https://huggingface.co/krishna4244/lora-trained-xl

2. LangChain-Based Streamlit Application

Description: Developed a memory-efficient LangChain-based Streamlit application for natural language queries and document retrieval.

Technologies Used: Streamlit, LangChain, FAISS, HuggingFace Embeddings, Groq Gemma model.

Features: Implemented chunk-based data loading, caching, and garbage collection to optimize memory usage.

Outcome: Demonstrated ability to build and deploy efficient AI-powered web applications, ensuring smooth performance and resource management.

Links: GitHub Repo - https://github.com/krishna42441/open-lanchain, Deployed Application - https://open-lanchain-azsajrjiappv9rkdvrxgpmq.streamlit.app/

3. Twitter Sentiment Analysis with NLTK Techniques

Role: Developed a sentiment analysis project utilizing Twitter data and NLTK techniques.

Data Collection: Gathered Twitter data through the Twitter API.

Preprocessing: Used NLTK for tokenization, stemming, and stop word removal.

Models: Implemented machine learning models including Naive Bayes and Support Vector Machines for sentiment classification.

Outcome: Achieved an accuracy rate exceeding 85%, providing valuable insights into public opinion and sentiment trends on Twitter.

4. Mobi Trade (Trade Application)

Role: Developed a secure back-end system using Node.js and Express.

Authentication: Implemented robust user authentication with MongoDB and Mongoose ODM, reducing unauthorized access attempts by 60%.

Inventory & API Integration: Created dynamic inventory carts for real-time updates and utilized Postman for seamless API integration, enhancing user experience and operational efficiency.

Outcome: Revolutionized the trading process by reducing transaction times by 50% and increasing user engagement by 35%, ensuring system reliability and high user satisfaction through rigorous testing.

Links: GitHub Repo - https://github.com/krishna42441/trade_project-krishna42441-main

Experience

Software Engineer

Company: Tata Consultancy Services, Hyderabad, India

Dates: June 2020 ? Dec 2022

Project: Dynaport (Import-export logistics with Adani)

Module: Specialized in developing the 'Railtos' module.

Outcome: Achieved a 20% improvement in invoicing accuracy for rail-based shipments.

Technologies: Engineered key components using Spring MVC, Hibernate, ExtJS, managing a database with over 500,000 records.

Bug Tracking: Played a pivotal role in implementing bug tracking mechanisms, reducing issue resolution time by 30% with Postman and Jenkins.

Junior Software Engineer

Company: Office of OneIT, University of North Carolina at Charlotte, USA

Dates: Jan 2024 ? May 2024

Responsibilities: Developed and rigorously tested code modules and scripts to support software development for faculty and research teams.

System Integration: Enabled seamless integration between platforms, including the UNC Charlotte University Library web page and OneIT Support website.

Application Support: Built and maintained web and mobile applications, such as query and ticketing systems, ensuring top-tier functionality and user experience.

Team Collaboration: Engaged in code reviews, debugging, and collaborative projects with fellow developers and TSO staff, driving productivity and innovation.

Certifications

AWS Certified Solutions Architect - Associate: Nov. 2023 - Nov. 2026

Red Hat Certified System Administrator (RHCSA): Jan. 2019 - Jan. 2022