Keval Saud

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Summary

Innovative Python Developer and Machine Learning enthusiast with 1+ years of experience in data analysis, application development, and AI integration. Proficient in developing scalable solutions, deploying ML models, and deriving actionable insights from complex datasets. Seeking a challenging Python Development Internship to contribute technical skills and collaborative spirit to innovative projects.

Education

University of Mumbai Mumbai, MH, IN
Master of Science in Computer Science *Aug 2023 – Aug 2025*

University of Mumbai Mumbai, MH, IN
Bachelor of Science in Computer Science *Jan 2018 – Mar 2021*

Experience

Research Intern March 2024 – May 2024
Physics Department, University of Mumbai *Mumbai, MH, IN*

- Conducted data analysis on Coronal Mass Ejections (CMEs) using NASA WIND Database spanning 20 years
- Developed Python scripts with Pyspedas, optimizing WIND API data extraction and reducing processing time by 40%
- Implemented data cleaning algorithms using Pandas to address null datasets (CDF) and ensure data integrity
- Performed exploratory data analysis (EDA) on multi-year WIND Database datasets to identify key insights
- Managed codebase and version control on GitHub, facilitating collaboration and maintaining project structure

Jr. Software Developer May 2022 – Jun 2023
SquareYards *Mumbai, MH, IN*

- Automated data extraction and processing using Python (requests and Selenium), reducing manual effort by 30%
- Led development of AI chatbots using Langchain, Cohere embeddings, and OpenAI GPT-3.5, improving customer satisfaction by 25%
- Optimized data storage by transferring Cohere embeddings to vector databases, increasing efficiency by 30%

Freelance Python Developer Nov 2021 – May 2022
Self-Employed *Remote*

- Developed predictive models using pandas for data cleaning and Matplotlib for visualization
- Trained ML models for prediction and classification, improving accuracy by an average of 15%
- Collaborated with international clients to deliver customized solutions within agreed timelines

Technical Skills

Languages: Python, SQL, JavaScript, C++, Java
Python Libraries: Pandas, NumPy, Scikit-learn, TensorFlow, Selenium, Requests
Frameworks: Flask, Django, LangChain, Streamlit, Gradio
Data Visualization: Matplotlib, Seaborn, Plotly, Power BI
Databases: MongoDB, MySQL, Cassandra, Redis, HBase
Tools & Platforms: Git, GitLab, HuggingFace, Kaggle, Docker, Jupyter, Anaconda

Projects

LLM Codebase | *Python, LangChain, Hugging Face, RAG, Fine-tuning*

- Developed a comprehensive LLM integration platform showcasing advanced NLP and AI techniques
- Implemented RAG (Retrieval-Augmented Generation), improving response accuracy by 40% compared to standard context-based LLMs
- Designed and deployed AI Agents, enhancing task completion efficiency by 35% for complex operations
- Utilized RAGAS for rigorous evaluation, leading to a 25% improvement in overall RAG system performance
- Conducted fine-tuning of open-source LLMs using LoRA, achieving a further 20% boost in task-specific accuracy over RAG
- Integrated multiple open-source LLMs (Llama 2, Llama 3.1, Mistral, Gemma, StableLM, Dolly, Phi 2/3), providing a 50% wider range of specialized capabilities
- Developed a modular architecture allowing easy switching between LLM backends, reducing model swap time by 70%
- Created an interactive UI with Streamlit, increasing user engagement by 60% and enabling rapid prototyping

LoRA Fine-Tuned Diffusion Model | *Python, Diffusers, Machine Learning*

- Trained a Stable Image Generation Model using LoRA (Low-Rank Adaptation) technique
- Enhanced training outcomes through improved image generation capabilities
- Achieved 30% reduction in GPU consumption during model training
- Evaluated model performance and identified areas for future improvements

Advanced Automated Crawler and Data Miner | *Python, Django, PostgreSQL, Web Scraping, Automation*

- Developed a sophisticated, national-level web scraping and data mining system during tenure as Jr. Software Developer
- Engineered robust automation capable of bypassing complex request systems, including login pages and CAPTCHAs
- Implemented multi-token request handling for enhanced scraping capabilities and to avoid rate limiting
- Designed and integrated a PostgreSQL database system for efficient storage and management of large-scale scraped data
- Utilized Django framework to create a user interface for monitoring and controlling the scraping operations Achieved significant improvements in data collection efficiency, reducing manual effort by over 90%
- Implemented advanced error handling and retry mechanisms to ensure reliable data extraction in various scenarios

Heart Disease Prediction Web App | *Python, Flask, HTML, CSS, JavaScript, ML Algorithms*

- Developed a web application for predicting heart disease using Flask framework
- Implemented various ML algorithms to analyze patient data and predict heart disease risk
- Created an intuitive user interface using HTML, CSS, and JavaScript for data input and result display
- Integrated the ML model with the web app for real-time predictions

Certifications

ML Workshop at IITB: Completed an intensive workshop by faculty at IIT Bombay
Scientific Computing [Python]: Advanced Python Skills by FreeCodeCamp.org
Data Science 101 [Python]: Completed Basics of DS using Python