Akash Sukhavasi

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Summary

Detail-oriented Machine Learning & Data Analytics Engineer with expertise in building and deploying ML models, neural networks, and AI-driven systems. Skilled in leveraging cloud platforms for data analytics, deep learning, and big data solutions to drive business insights and automate complex processes.

Education

George Mason University — **December 2024**
Master's — Data Analytics Engineering | *GPA: 3.8 / 4* — Fairfax, VA, USA

GITAM University — **June 2021**
Bachelor's — Computer Science & Engineering — Hyderabad, TG, India

Skills

Computational Languages: Python, R, SQL, C, C++, C#, Java, Swift

Developer Tools: Amazon Web Services (AWS), Azure, Git, Docker, Jenkins, Visual Studio, Spark, Hadoop, REST API

ML/AI Tools: TensorFlow, PyTorch, Scikit-learn, Hugging Face Transformers, Keras, OpenCV, NLTK, Neo4J, LangChain

Visualization: Tableau, Power BI, Matplotlib, Seaborn, Tidyverse, Plotly

Relevant Courses: Data Mining, Deep Learning, Reinforcement Learning, Computer Vision, NLP, Operations Research

Experience

George Mason University | Fairfax, VA, USA — **August 2024 - Present**
Machine Learning Engineer — *Python, LLMs, Neo4J, Graph Databases, PubMed API, GenAI Implementation*

- Developing an AI-driven data pipeline utilizing the PubMed API to automate the retrieval and processing of cancer research articles, transforming unstructured data into structured Neo4J graph databases.
- Leveraged large language models (LLMs) to extract predictive insights, analyzing drug efficacy and identifying potential adverse effects for cancer treatments, with 20% improvement.
- Developed and implemented automated knowledge extraction and harmonization, fuzzy normalization techniques, and constructing knowledge graphs to enhance treatment prediction accuracy by 25% and improving drug response insights.

V. V. Technologies | Hyderabad, TG, India — **May 2017 - Nov 2021**
System Integrator, Network Engineer — *System Configuration, Component Integration, Troubleshooting*

- Configured and optimized custom hardware and software systems tailored to client specifications, custom installation scripts, reducing installation & configuration time by 50-75%.
- Deployed scalable network infrastructure for small businesses, boosting performance, and improving up-time to 99%.

Avishkar Software Labs | Hyderabad, TG, India — **May 2019 - July 2019**
Junior iOS Developer — *Swift Programming, Git, iOS App Development*

- Defined comprehensive iOS app development requirements, delivering optimized solutions that improved app performance by 15% through collaboration with cross-functional production teams.
- Partnered with design teams to refine app functionality, maintain codebase, and manage operational tasks.

Projects

Exploring Changes in Economy: Central Banks v Digital Currency — **January 2024 - May 2024**
A Multi-Model Approach — *Python, R, ETL, LSTM, Random Forest, Git, Web Development*

- Led AI-driven analysis of central bank digital currency impacts using machine learning models (LSTM, Random Forest) to assess cryptocurrency volatility and price trends.
- Enhanced prediction accuracy for Bitcoin (94.5%) and Ethereum (90.7%) through optimized ML models.

Integrated Analysis of Air Quality — **August 2023 - November 2023**
A Multi-Tool Approach — *Python, R, SQL, AWS, Big Data*

- Developed AI-driven pipelines to process and analyze environmental health data, applying machine learning models (Random Forest, SVM) to assess air quality's impact on respiratory health.
- Utilized AWS and Python-based ETL workflows to automate data handling and predictive analysis.

FireFlyer - Intelligent Early Situational Awareness to Firefighters — **September 2023 - November 2023**
Unmanned Aerial Systems Prototyping — *CAD, Prototyping, ML, Computer Vision, Project Management, Pitch Incubation*

- Designed an AI-powered prototype for real-time situational awareness for first responders in firefighting, risk prediction and response optimization. Reduced response time by 54% by leveraging real-time data from UAVs and AI models for early detection of fire hazards.
- Awarded Runner-Up in the competition for the solution, securing $500 in prize.