Akash Sukhavasi

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Summary

Detail-oriented Machine Learning 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++, Java, Swift
ML/AI Tools: TensorFlow, PyTorch, Scikit-learn, Keras, LangChain, Neo4J, Hugging Face Transformers, OpenCV, NLTK
Cloud & Big Data: Amazon Web Services (AWS), Azure, Spark, Hadoop, REST API
Visualization: Tableau, Power BI, Matplotlib, Seaborn, Tidyverse
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 pipeline using PubMed API to retrieve cancer research articles, converting unstructured data into graph databases with Neo4J.
- Extracting predictive insights using LLMs to analyze drug efficacy and adverse effects for cancer treatments.
- Implementing automated knowledge extraction and harmonization techniques to build knowledge graphs, updating treatment predictions and drug response understanding.

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

- Configured custom hardware and software systems to meet specific client requirements and optimized setups.
- Deployed small business network infrastructure, enhancing bandwidth, security, and system reliability.

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

- Defined iOS development requirements and delivered efficient solutions in collaboration with 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 - Automated 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 in firefighting, using ML for 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.