

# 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

<b>George Mason University</b> Master's — Data Analytics Engineering   GPA: 3.8 / 4	<b>December 2024</b> Fairfax, VA, USA
<b>GITAM University</b> Bachelor's — Computer Science & Engineering	<b>June 2021</b> Hyderabad, TG, India

## Skills

<b>Computational Languages:</b> Python, R, SQL, C, C++, C#, Java, Swift
<b>Developer Tools:</b> Amazon Web Services (AWS), Azure, Git, Docker, Visual Studio, Spark, Hadoop, REST API
<b>ML/AI Tools:</b> TensorFlow, PyTorch, Scikit-learn, Hugging Face Transformers, Keras, OpenCV, NLTK, Neo4J, LangChain
<b>Visualization:</b> Tableau, Power BI, Matplotlib, Seaborn, Tidyverse, Plotly
<b>Relevant Courses:</b> Data Mining, Deep Learning, Reinforcement Learning, Computer Vision, NLP, Operations Research

## Experience

<b>George Mason University</b>   Fairfax, VA, USA <b>Machine Learning Engineer</b>	<b>August 2024 - Present</b> <i>Python, LLMs, Neo4J, Graph Databases, PubMed API, GenAI Implementation</i>
<ul style="list-style-type: none"><li>Developed 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.</li><li>Leveraged large language models (LLMs) to extract predictive insights, analyzing drug efficacy and identifying potential adverse effects for cancer treatments, with 20% improvement.</li><li>Developed and implemented automated knowledge extraction and harmonization techniques, constructing knowledge graphs to enhance treatment prediction accuracy by 25% and improving drug response insights.</li></ul>	
<b>V. V. Technologies</b>   Hyderabad, TG, India <b>System Integrator, Network Engineer</b>	<b>May 2017 - Nov 2021</b> <i>System Configuration, Component Integration, Troubleshooting</i>
<ul style="list-style-type: none"><li>Configured and optimized custom hardware and software systems tailored to client specifications, custom installation scripts, reducing installation &amp; configuration time by 50-75%.</li><li>Deployed scalable network infrastructure for small businesses, boosting performance, and improving up-time to 99%.</li></ul>	
<b>Avishkar Software Labs</b>   Hyderabad, TG, India <b>Junior iOS Developer</b>	<b>May 2019 - July 2019</b> <i>Swift Programming, Git, iOS App Development</i>
<ul style="list-style-type: none"><li>Defined comprehensive iOS app development requirements, delivering optimized solutions that improved app performance by 15% through collaboration with cross-functional production teams.</li><li>Partnered with design teams to refine app functionality, maintain codebase, and manage operational tasks.</li></ul>	

## Projects

<b>Exploring Changes in Economy: Central Banks v Digital Currency</b> <b>A Multi-Model Approach</b>	<b>January 2024 - May 2024</b> <i>Python, R, ETL, LSTM, Random Forest, Git, Web Development</i>
<ul style="list-style-type: none"><li>Led AI-driven analysis of central bank digital currency impacts using machine learning models (LSTM, Random Forest) to assess cryptocurrency volatility and price trends.</li><li>Enhanced prediction accuracy for Bitcoin (94.5%) and Ethereum (90.7%) through optimized ML models.</li></ul>	
<b>Integrated Analysis of Air Quality</b> <b>A Multi-Tool Approach</b>	<b>August 2023 - November 2023</b> <i>Python, R, SQL, AWS, Big Data</i>
<ul style="list-style-type: none"><li>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.</li><li>Utilized AWS and Python-based ETL workflows to automate data handling and predictive analysis.</li></ul>	
<b>FireFlyer - Automated Early Situational Awareness to Firefighters</b> <b>Unmanned Aerial Systems Prototyping</b>	<b>September 2023 - November 2023</b> <i>CAD, Prototyping, ML, Computer Vision, Project Management, Pitch Incubation</i>
<ul style="list-style-type: none"><li>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.</li><li>Awarded Runner-Up in the competition for the solution, securing \$500 in prize.</li></ul>	