Rohith Velan Singaravelu

520-427-2425 | singaravelurohith@gmail.com | LinkedIn

SUMMARY

Dynamic Data Scientist & Machine Learning Engineer with 4+ years of experience designing and deploying end-to-end ML solutions. Expert in leveraging Python, SQL, TensorFlow, Scikit-learn, and Pandas to extract insights and drive automation. Skilled in deep learning, NLP, model optimization, and MLOps practices. Proven ability to build scalable pipelines and deploy models on AWS and Azure, delivering impactful, data-driven outcomes across diverse domains.

SKILLS

Programming & Scripting: Python, SQL, Bash, REST APIs

Machine Learning & AI: Deep Learning, Reinforcement Learning, Transfer Learning, Natural Language Processing (NLP), Generative AI (GenAI), LLM-powered NLP (Hugging Face), Time Series Forecasting, A/B Testing, Feature Engineering, Model Optimization, Cross-validation, Statistics, Hypothesis Testing

Libraries & Frameworks: TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, OpenCV

Big Data & Data Engineering: Apache Spark, Hadoop, Kafka, Airflow, ETL Pipelines, Data Wrangling, Data Cleansing, OOP, OOD **Cloud & MLOps:** AWS (SageMaker, Lambda, S3, ECS, EC2), Azure (ML, Data Factory, Blob Storage, SQL), MLflow, Docker,

Kubernetes, Jenkins, DVC, Git, GitLab

Databases: MySQL, PostgreSQL, MongoDB, Snowflake, Amazon Redshift **BI & Visualization Tools:** Power BI, Tableau, Jupyter Notebook, Excel

Deployment & APIs: TensorFlow Serving, Flask, Model Deployment, Real-Time Inference

Project & Collaboration Tools: Jira, Confluence, Slack, Microsoft Teams

PROFESSIONAL EXPERIENCE

ML Engineer, Cardinal Health

Dec 2024 - Present | USA

- Designed and deployed scalable machine learning pipelines using Airflow, DVC, and GenAI-based retraining triggers to support 50+ annotation workflows, reducing model staleness and iteration lag by nearly 30%.
- Developed high-throughput LLM-powered NLP inference services using Hugging Face Transformers with TensorFlow Serving, containerized in Docker, and deployed via Amazon ECS, enabling real-time processing with <200ms latency.
- Built serverless batch scoring pipelines for unstructured document processing using AWS Lambda and NLP preprocessing techniques, delivering 150K+ daily predictions while cutting compute usage by 23%.
- Set up Kafka-based feedback loops to enable continuous learning in deployed LLM models, allowing real-time human-in-theloop corrections to boost output reliability across annotation tasks.
- Automated CI/CD pipelines with Jenkins and GitLab for model testing, container versioning, and rollback safety, improving
 deployment velocity by 57% and reducing post-deployment incidents.
- Documented model architectures, fine-tuning workflows, GenAI integration steps, and pipeline standards in Confluence, accelerating new engineer ramp-up and fostering stronger cross-functional collaboration.

Data Scientist, Deloitte

Sep 2022 - Aug 2024 | India

- Designed and implemented custom fraud detection systems for financial data pipelines using PyTorch, which analyzed over 3 million transactions monthly and led to an 18% improvement in anomaly detection precision across client portfolios.
- Constructed large-scale ETL workflows with Apache Spark and orchestrated them using Azure Data Factory, enabling the
 daily processing of over 5TB of structured and semi-structured regulatory data and significantly accelerating reporting cycles.
- Standardized experimentation and model lifecycle workflows using Azure ML, enhancing deployment reproducibility and reducing average model delivery time from 3 weeks to under 10 working days.
- Built and maintained operational dashboards in Power BI, directly integrated with Azure SQL, allowing risk and compliance teams across eight regions to access real-time metrics without analyst intervention.
- Managed model version control, parameter logging, and using MLflow, while maintaining compliance-ready documentation through Confluence, helping improve audit readiness and knowledge transfer between teams.
- Collaborated cross-functionally with analytics, legal, and software engineering teams using JIRA, translating evolving policy rules and risk definitions into machine learning logic deployed in more than a dozen enterprise-grade solutions.

Data Analyst, Myntra

Aug 2021 - Aug 2022 | India

- Crafted a recommendation engine using NLP-based vector embeddings and clustering algorithms, enhancing personalized product suggestions across 3–4 million monthly active users and improving content relevance during high-traffic seasons.
- Automated visual classification of 500,000+ fashion products using OpenCV and lightweight CNNs, deployed on AWS EC2, reducing manual effort during catalog launches.
- Conducted multi-week A/B experiments on pricing strategies using campaign data processed via Pandas and stored in Amazon Redshift, leading to a 12% increase in click-through rates for curated deals.
- Engineered interactive business dashboards in Tableau, supporting internal users across marketing and merchandising with access to real-time product performance KPIs, reducing reporting requests by around 40%.
- Served prediction results through a lightweight Flask API that was smoothly integrated into the product detail and checkout flows, enabling real-time insights that supported a seamless user experience.
- Analyzed more than 30 million rows of behavioral and transaction data using SQL and Pandas, enabling segmentation-driven push campaigns that generated over 50,000 incremental daily app interactions.

EDUCATION

Masters in Information Science (Machine Learning): GPA: 3.7/4.0

Aug 2023 - May 2025

University of Arizona, Tucson, AZ

Bachelor of Technology in Computer Science and Engineering: GPA: 9.0/10.0

Jul 2019 - June 2023

Vellore Institute of Technology, Vellore, India

CERTIFICATIONS

• Foundations: Data, Data, Everywhere – Google (Coursera), April 2021