ALEKHYA SOMISETTY

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PROFESSIONAL SUMMARY

Data & AI-focused Engineer with 1+ year of experience delivering end-to-end machine learning, predictive analytics, SQL-driven insights, and Generative AI automation solutions. Strong foundation in regression, classification, data mining, and structured data validation. Experienced in building scalable data pipelines and containerized ML systems. Passionate about translating business problems into actionable, data-driven strategies.

TECHNICAL SKILLS

- **Programming & Data**
  Python, SQL (MySQL, PostgreSQL), Java (basic), Go (basic)
- **Machine Learning & Statistics**
  Linear & Logistic Regression, Decision Trees, Random Forest, Support Vector Machines (SVM), Neural Networks Predictive Modeling, Classification, Feature Engineering, Model Evaluation (Precision, Recall, F1-Score), Data Cleaning & QA Validation
- **NLP & Generative AI**
  TF-IDF, Text Preprocessing, Retrieval-Augmented Generation (RAG), Prompt Engineering, LLMs, AI Agents, LangChain, n8n, Flowise,Node-RED
- **Data Analytics & BI**
  Advanced SQL (JOINs, CTEs, Window Functions, Aggregations), Excel, Tableau, Power BI, KPI & Trend Analysis
- **Cloud & Deployment**
  Docker, Terraform, CI/CD, GitLab, Model Serialization (Joblib), Containerized Databases

WORK EXPERIENCE

Cisco Systems – Bengaluru, India
Consulting Engineer 04/2025 – Present

- Reduced manual validation effort by 40% by designing Python automation workflows.
- Built structured data pipelines processing 10K+ records for validation and automated reporting
- Integrated AI-assisted decision logic into enterprise automation systems.
- Collaborated with cross-functional teams to deliver scalable and maintainable solutions.
- Followed CI/CD best practices with Git-based workflows and automated validation checks.
- Used Terraform to provision infrastructure supporting scalable automation services.
- Developed automation validation frameworks using Python and Robot Framework.

Tata Consultancy Services – Hyderabad, India
Software Engineer 02/2024 – 04/2024

- Developed and tested RESTful APIs supporting analytics-driven backend applications.
- Wrote optimized SQL queries using JOINs, CTEs, aggregations, and window functions to extract and analyze business data.
- Performed data cleaning, transformation, and validation to ensure reporting accuracy.
- Analyzed month-over-month performance trends and customer behavior patterns.
- Built reusable SQL views to streamline reporting workflows.
- Collaborated with business stakeholders to translate analytical requirements into technical solutions.

CERTIFICATIONS

- Microsoft Technology Associate – Python
- Data Science with Generative AI
- AI Automation
- Introduction to AI Engineering
- CCNA (Training)

EDUCATION

Bachelor of Technology – Computer Science
G. Pulla Reddy Engineering College 2020 – 2024
CGPA: 9.5 / 10

PROJECTS

Brain Tumor & Pneumonia Detection System (Final Year Project)
Tech: Python, TensorFlow/Keras, CNN, OpenCV

- Developed deep learning models to detect brain tumors (MRI scans) and pneumonia (X-ray images).
- Achieved 92%+ accuracy in CNN-based medical image classification models.
- Applied image preprocessing and augmentation techniques to improve model performance.
- Evaluated models using accuracy, precision, and recall metrics.
- Designed simple prediction interface for result visualization.

Credit Card Fraud Detection System
Tech: Python, Scikit-learn, Pandas

- Built end-to-end fraud detection pipeline using supervised learning techniques.
- Performed feature engineering and handled class imbalance.
- Implemented Logistic Regression, Random Forest, and SVM models.
- Evaluated using precision-recall metrics aligned with financial risk assessment.

Resume Screening & Categorization Application
Tech: Python, Scikit-learn (SVM, TF-IDF), NLP, Streamlit, Joblib

- Developed ML-based system to automatically classify resumes into job categories.
- Implemented text cleaning and TF-IDF vectorization for feature extraction.
- Trained and evaluated Support Vector Machine (SVM) classifier.
- Built interactive Streamlit web application for resume upload and prediction.
- Serialized trained model using Joblib for reusable inference.

Enterprise Generative AI Knowledge Assistant
Tech: Python, LLMs, RAG

- Implemented Retrieval-Augmented Generation (RAG) pipeline for document intelligence.
- Designed chunking strategies (token-based and semantic) to improve retrieval accuracy.
- Built embedding-based semantic search with LLM-driven response generation.
- Applied prompt engineering techniques to enhance output quality.