ROHIT AKOLE

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PROFESSIONAL SUMMARY

Data Scientist with 5+ years of experience delivering end-to-end machine learning solutions in **SaaS and product-driven environments** across operations, customer analytics, and NLP applications. Specialized in machine learning, deep learning, LLMs, predictive modeling, and data storytelling. Proven track record of improving forecast accuracy by **37%** and saving over **13 hours per client** in onboarding through automation and intelligent data pipelines.

PROJECTS

- **S&P 500 Stock Analysis: Evaluating Risk & Return.** Developed a portfolio optimization framework using **Modern Portfolio Theory (MPT)** across three S&P sectors, applying covariance matrices and expected returns for asset selection. Simulated 1,000+ portfolios via **Monte Carlo methods**, evaluated Sharpe ratios and applied **integer programming** for budget-constrained optimization. Visualized results using heatmaps and frontier plots with data from the **Yahoo Finance API**. (Try it here)

- **Humana-Mays Healthcare Analytics Case Competition 2024.** Ranked top 10% (26/290+ teams) in a national challenge focused on closing preventive care gaps. Developed a **CUDA-optimized XGBoost model on 1.6M+** claims (AUC: 0.7686), identified KPIs like claims history and chronic conditions, and proposed 3 strategies (telehealth, mobile clinics, outreach) that led to a **37% increase in preventive care visits.**

- **Insurance Fraud Detection Using Machine Learning.** Built and tuned 10+ ML classification models (Random Forest, Logistic Regression, Decision Tree) on 150K+ insurance claims to identify fraud, improving **precision to 92% and recall to 88%.** Final model reduced false positives by 20% and **increased fraud detection by 25%**, driving projected savings of $250K. (Try it here)

EXPERIENCE

Data Scientist Consultant (Capstone) — December 2024 – May 2025
Stanley Black and Decker — Hartford, CT

- Built and Deployed 3 time series models (**SARIMAX, RNN, LSTM**) to forecast 12-month MTD warranty claims, improving 37% accuracy, detected a regional anomaly that triggered early investigation by Warranty Strategy and Compliance Risk teams.
- Using an **LLM-based pipeline** (LLaMA3 in Docker), **extracted 9 key features** from 375K+ dealer logs reducing manual error in unstructured text and **improving issue detection by 30%**, enabling faster triage & diagnostics across engineering workflows.
- Built an interactive **Tableau dashboard** with filters and drilldowns to visualize forecasts, service trends, and LLM insights, improving issue tracking and enabling faster, data-backed decisions by senior leadership.
- Ranked 1st out of 5 in competitive capstone, **recognized by the Global VP of Quality and Assistant Controller**.

Data Scientist — January 2025 – April 2025
Alo Index — New York, NY

- Cut document review time by 81%, building an LLM-powered document intelligence engine (**Docker + Ollama, Mistral, PyMuPDF**) for the risk and compliance team that auto-mapped key content in uploaded PDFs to questionnaire fields.
- **Reduced onboarding cycle time by 13 hours per client** implementing NLP-driven autofill for 300+ due diligence questions, enabling scalability for account managers and analysts.
- Improved data quality across 1.2M+ records using supervised ML, increased **risk assessment and reporting accuracy by 97%.**
- Streamlined onboarding workflows for client success and operations teams by automating structured data ingestion from 33 third-party sources across 6.7K+ entities.

Business Strategy & Data Consultant — January 2020 – May 2023
Greetworld Holidays — Pune, India

- Built Excel dashboards & performed scenario analysis to optimize tour logistics, **reducing costs by 15%.**

- Analyzed customer demographics and booking trends to identify high-value segments, implemented targeted marketing campaign strategies to **increase repeat bookings by 47%.**
- **Improved customer experience by 12%** in NPS through feedback-driven service enhancements; negotiated partner deals that increased platform visibility and profit margins.

Business Strategy Consultant   May 2015 – November 2016
Greetworld Holidays   Pune, India

- Supported **onboarding and trip planning for 100+ clients**, improving repeat engagement and enhancing service team satisfaction through personalized follow-ups.
- Contributed to **vendor research and seasonal campaign planning**, helping management optimize pricing and expand service packages, which grew early-stage bookings by an estimated 18% in peak seasons.

EDUCATION

Master of Science, Business Analytics and Project Management, University of Connecticut   2023 - 2025

- **GPA**: 4.00/4.00 | **Key Courses:** Statistics, Predictive Modeling, Deep Learning, Data Mining, Data Science using Python, Agile Methodologies, Data Management & Modeling, Business Decision Modeling
- **Graduate Teaching Assistant – Deep Learning:** Assessed graduate-level assignments involving CNNs, RNNs, transformers, and optimization techniques; evaluated model architecture, training strategies, and performance metrics (e.g., loss curves, overfitting) and provided feedback on hyperparameter tuning, interpretability techniques.

Master of Science, Technology Management (IT and Big Data), University of Bridgeport   2017 - 2019

Bachelor of Business Management (E-Commerce), North Maharashtra University   2012 – 2015

ACHIEVEMENTS

- **Hackathons:** Won three hackathons and placed 1st in two and 2nd in one hackathon organized by Modlee.ai.
- **Awarded** merit-based scholarship twice (Spring 2024 and Spring 2025) for outstanding performance.
- **Leadership:** President and Founder of Modlee AI/ML Student Club.
- **Keynote:** Delivered a live LLM agent demo at AI Day, engaged 50+ technical and non-technical professionals.
- **Recognition:** Featured twice in University Weekly Scoop – recognized for contributions to AI/ML.
- **IBM Professional Certifications:** IBM Data Analyst (2022), IBM Data Science (2021).

SKILLS

Data Science & ML	Machine Learning, Deep Learning, TensorFlow, SHAP, Predictive Modeling, Probability, Causal Inference, Time Series Forecasting, Natural Language Processing, Generative AI, Semantic Search, Sentiment Analysis, Recommender Systems, Feature Engineering, Statistical Modeling, Model Evaluation, Exploratory Data Analysis (EDA), A/B Testing, t-test
Programming	Python, SQL, PySpark, CUDA, HTML5, CSS3, JavaScript, R
Libraries & AI	Pandas, NumPy, Scikit-learn, PyTorch, Pyomo, Mistral, LLaMa3, PyMuPDF, Gemini, Prompt Engineering, LLMs
Data Engineering	Extract Transform Load (ETL), Data Pipelines, Automation, Data Integration, Linear & Non-Linear Optimizations, GPU Programming, Docker, Retrieval-Augmented Generation (RAG), Rest API, OAuth 2.0, Postman
BI & Reporting	Tableau, Power BI (DAX), Excel, SAS Studio, SAS Enterprise Miner, Lucid Chart
Cloud & Database	Snowflake, AWS, SQL Server, Oracle, Relational Databases, Big Data, Data Warehousing
Project Management	Agile, Scrum, CI/CD, Kanban, JIRA, GitHub, KPI Reporting, MS Project, SharePoint