ROHIT AKOLE

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DATA SCIENTIST

Data Scientist with a passion for transforming data into actionable insights. Skilled in programming, data analysis and visualization, project management, machine learning, deep learning, statistical modeling, and predictive analytics.

EDUCATION

UNIVERSITY OF CONNECTICUT, Hartford, CT
Master of Science (M.S.), Business Analytics and Project Management (Data Science), May 2025

- GPA: 4.00/4.00 | *Key Courses*: Statistics in Business Analytics, Predictive Modeling, Data Mining & Business Intelligence, Data Science using Python, Agile Project Management & Methodologies, Data Management & Business Process Modeling, Business Decision Modeling, Deep Learning
- *Leadership*: President and Founder of Modlee AI/ML Student Club. Organized hackathons, competitive events and projects, providing members with firsthand experience & industry insights through events featuring AI/ML professionals.
- *Speaking Engagement*: AI Agent Demo Speaker, Hartford AI Day 2025 – Invited to deliver a live LLM-based agent demo at an event hosted by Launc[H], attended by 50+ industry professionals (technical and non-technical audience).
- *Recognition*: Featured twice in Student Highlights, University Weekly Scoop – recognized for contributions to AI/ML community.

UNIVERSITY OF BRIDGEPORT, Bridgeport, CT
Master of Science (M.S.), Technology Management (IT and Big Data), May 2019

- GPA: 3.89/4.00 | *Key Courses*: Finance & Accounting, Strategic Sourcing & Vendor Management, Intro to Big Data & Data Science

NORTH MAHARASHTRA UNIVERSITY, Jalgaon, India
Bachelor of Business Management (E-Commerce), May 2015

- *Key Courses*: Financial & Cost Accounting, Corporate Accounting, Managerial Economics, MS Access, Business Mathematics & Statistics, System Analysis & Designing, Business Management, MIS & ERP, Oracle

EXPERIENCE

ALO INDEX, New York, NY — January 2025 – April 2025
Data Science Associate

- Automated ESG data integration for 6K+ hotels using APIs & Python, extracting data from 33 certifications.
- Validated 1.2M records and applied supervised ML to resolve inconsistencies, improved data accuracy by 97%.
- Reduced client onboarding time by 80% (5+ hours per client) by pre-filling 300+ ESG onboarding questions using NLP.
- Created an LLM-powered assessment engine with Ollama, Mistral, & semantic search. It mapped 300+ ESG questions to certification text, automating evidence extraction from PDFs and cut manual review time by 80%.
- Collaborated with founders to translate business insights into data-driven strategies, improved product decision-making and increased operational efficiency by 25%; gained leadership exposure in fast-paced startup environment.

STANLEY BLACK & DECKER, Hartford, CT — January 2025 – May 2025
***Data Scientist Consultant* (Capstone)**

- Forecasted 12-month warranty claim volumes & costs using time series modeling on five years of historical data (~375K claims, 1.6M+ rows) to support strategic planning.
- Leveraged LLM-based (llama3 using Docker) text mining on dealer communications (diagnosis & repair fields) to identify recurring issues & extract nine actionable features.
- Developed an interactive Tableau dashboard to present historical trends, forecast outputs and text mining driven visualizations (e.g., word clouds) for cross-functional use.
- Earned 1st Place – ranked 1st among five teams.

UNIVERSITY OF CONNECTICUT, Hartford, CT — January 2025 – May 2025
Graduate Teaching Assistant – Deep Learning

- Evaluated graduate-level assignments with a focus on code quality, model performance and documentation.
- Delivered individualized, constructive feedback to support student learning and model implementation best practices.

GREETWORLD HOLIDAYS, Pune, India — January 2020 – May 2023
Business Operations Lead – Tourism Startup

- Restructured business strategy during COVID-19, stabilizing operations and adapting to shifting demand.
- Optimized transportation routes, resource allocation, and tour schedules, reducing logistics costs by streamlining operations.
- Led customer outreach initiatives to re-engage existing clients and attract new segments.
- Negotiated partnership with a booking platform to secure improved commission rates and increase booking visibility.

KS WEBAPPS, Pune, India — May 2014 – November 2016
Software Developer (July 2015 – November 2016) & ***Software Developer Intern*** (May 2014 – June 2015)

- Optimized Python-based queries and workflows, improving application performance by 25%.

- Built and tested scalable application components (85–90% success rate) in Agile, Test-Driven Development (TDD) environment using Django REST Framework.
- Executed and tuned DML/DDL queries using MySQL and Python-MySQL connector for backend integration.
- Designed RDBMS models for small business clients using MS Visio ERP tools.
- Delivered 15+ client presentations with a cross-functional team to support implementation and deployment.

PROJECTS

Travelers Modeling Competition (XGBoost, Lasso Regression, Gradient Boosting) September 2024 – December 2024

Ranked Top 3 out of 22 teams for call center operations forecasting.

- Developed and implemented ML models including XGBoost, Lasso Regression, and Gradient Boosting to forecast claim volumes for call center operations, enhancing resource planning.
- Performed data cleaning, exploratory data analysis, and data visualization using Python.

Humana-Mays Healthcare Analytics Case Competition 2024 (XGBoost, LightGBM, CUDA) August 2024 – October 2024

Ranked 26th out of 290+ teams, top 10% in national healthcare analytics challenge.

- Developed CUDA optimized XGBoost model for a dataset of 300+ columns & 1.6M rows, achieving 77% accuracy (AUC: 0.7686), identified KPI such as claims history and chronic conditions addressing preventive healthcare visit gaps.
- Implemented strategies such as mobile clinics, telehealth services, and outreach programs, which improved healthcare access and patient engagement, resulting in increased preventive care visits.

Predictive Modeling of Adolescent Digital Overuse (TSFresh, SMOTE, FNN, SHAP, Parquet Processing)

- Processed 986 time-series parquet files to engineer 300+ features from physical activity, heart rate and sleep data, enabling predictive modeling using deep learning techniques of adolescent internet overuse.
- Achieved R^2 of 0.72 using Feed-Forward Neural Network, with SHAP analysis revealing sedentary time and disrupted sleep as top predictors; applied SMOTE to improve model generalization & fairness.
- Delivered key correlations through multivariate visuals to support early interventions in pediatric behavioral health.

Insurance Fraud Detection Using Machine Learning (Decision Tree, Random Forest, Logistic Regression)

- Engineered machine learning models to detect insurance fraud, achieving a precision of 92% and a recall of 88%.
- Preprocessed/analyzed 50K+ insurance claims data, performing feature selection & extraction improving model accuracy by 15%.
- Implemented the final Random Forest model with hyperparameter tuning, reducing false positives by 20% and overall fraud detection rate by 25%, leading to projected annual savings of $500K.

AI-Powered Gmail Assistant (Gmail API, Gemini AI, NLP, TextBlob, Pandas, PyMuPDF, LLM, Agentic AI)

- Developed an AI-driven agent that reads, summarizes and prioritizes unread Gmail messages, parsing both email content and attachments using NLP and LLM based summarization.
- Automated email replies with Gemini AI by generating sentiment-aware summaries and three personalized response options with dynamic placeholders and in-thread Gmail API integration.
- Demonstrated the end-to-end intelligent workflow and internal logic behind real-time, human-like email handling.

ADDITIONAL INFORMATION

- *Hackathons;* 1st & 2nd Place - Won three hackathons and placed 1st in two and 2nd in one hackathon organized by Modlee.ai.
- *Publications*:
  - Rohit Vikas Akole (2021); Operation and Significance of Supply Chain Management (SCM) in Business; International Journal of Scientific and Research Publications (IJSRP) 11(6) (ISSN: 2250-3153)
  - Akole, R. V. (2019) Problems and Solutions for Project Management Information Systems. International Journal of Science and Engineering Investigations (IJSEI), 8(87), 80-85.
- *Peer Reviews*: Reviewed manuscripts for *Asian Journal of Economics, Business and Accounting* (Certificate No: PRAJEBA113398ROH), March 2024 and for *Archives of Current Research International* (Certificate No: PRACRI121283ROH), August 2024.
- *IBM Professional Certifications:* IBM Data Analyst (Coursera, 2022), IBM Data Science (Coursera, 2021)
- *Languages*: Fluent in Hindi and Marathi
- *Skills*:
  - **Programming:** Python, SQL, PySpark, CUDA, Pandas, NumPy, Scikit-learn, HTML5, CSS3, JavaScript
  - **Data Science/Analytics:** Machine Learning, Deep Learning, Predictive Modeling, A/B Testing, Time Series Forecasting, Natural Language Processing (NLP), Generative AI, Sentiment Analysis, Feature Engineering, Statistical Modeling, Model Evaluation, Exploratory Data Analysis (EDA), PyTorch, Snowflake, AWS, t test, ANOVA, Monte Carlo Simulations
  - **Tools/Libraries:** GitHub, Tableau, Power BI, Lucid Chart, Django, Excel, Access, SAS Studio, JIRA, SAS Enterprise Miner, R
  - **Data Engineering & Infrastructure:** Extract Transform Load (ETL), Data Pipelines, Data Warehousing, APIs, REST APIs, SQL Server, Relational Databases, Big Data, Docker, GPU Programming, MLOps, Linear Optimizations, Non Linear Optimizations
  - **Agentic AI/Large Language Models:** Semantic Search, Mistral, LLaMa3, PyMuPDF, Gemini AI, Prompt Engineering
  - **Methodologies:** Agile, Scrum, Kanban