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
- Awarded merit-based scholarship twice (Spring 2024 and Spring 2025) for outstanding academic performance.
- *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] in Hartford, 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
Data Science Associate January 2025 – April 2025

- Automated ESG data integration for 6.7K+ 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 83% (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 81%.
- 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
Data Scientist Consultant (Capstone) January 2025 – May 2025

- 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, improving issue resolution processes.
- Developed an interactive Tableau dashboard to present historical trends, forecast outputs and text mining driven visualizations (e.g., word clouds) for cross-functional use.
- Achieved 1st place among five teams in data science competition by applying advanced data science techniques and solutions.

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

- 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
Business Strategy & Data Consultant January 2020 – May 2023

- Analyzed customer demographics and historical booking data to identify high-value segments, informing targeted marketing strategies and boosting repeat bookings.
- Created Excel-based dashboards to track booking trends, revenue impact, and seasonal demand patterns, supporting data-driven decisions during post-COVID recovery.
- Optimized transportation routes and tour schedules using cost modeling and scenario analysis, reducing logistics costs by 15%.
- Performed EDA on customer feedback to uncover service gaps, driving process improvements and a 12% NPS increase.
- Negotiated partnerships with online booking platforms using pricing and commission analytics to increase visibility and margin.

Business Strategy Consultant May 2015 – November 2016
- Supported client onboarding, trip planning, and post-service follow-ups, improving overall customer experience.
- Assisted in vendor research, pricing decisions, and service package development to support early-stage business growth.
- Contributed to marketing and customer outreach initiatives, including social media promotions and seasonal campaign planning.

PROJECTS

S&P500 Stock Analysis: Evaluating Risk & Return (Modern Portfolio Theory, Integer Programming, Monte Carlo Simulation, YFinance)
- Built a stock portfolio optimization framework using Modern Portfolio Theory (MPT) across Utilities, Healthcare, and Real Estate sectors of the S&P 500, leveraging expected return and covariance matrices for asset selection.
- Simulated over 1,000+ portfolios using Monte Carlo techniques to evaluate Sharpe ratios and frontiers under different rebalancing strategies; applied integer programming for budget-constrained portfolio selection.
- Pulled historical pricing using Yahoo Finance API and visualized risk-return tradeoffs with heatmaps and frontier plots.

Bank Client Segregation (Clustering, Customer Segmentation, Data Visualization, Tableau, Data Cleaning, Story Telling)
- Segmented 10K+ bank clients using behavioral and demographic data, improving targeting strategies across 3 core product lines.
- Designed Tableau dashboards with filters & drilldowns, enabling 40% faster insights for relationship managers and marketing teams.
- Increased segmentation accuracy by 30%, contributing to a 25% rise in product-specific engagement and upsell conversions.

Lending Analysis: Predicting Loan Approval & Default Risk (Supervised Learning, Random Forest, Gradient Boosting, Scikit-learn)
- Processed data from 50,000+ loan applications to model approval likelihood and default risk using supervised learning algorithms.
- Trained and tuned 9 Machine Learning Regression models to identify high-risk borrowers and key default predictors.
- Boosted default prediction accuracy by 20%, cut false positives by 15%, and reduced model training time by 30%, improving loan approval efficiency while balancing bias variance trade-off.

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

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.

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*:
    - Asian Journal of Economics, Business and Accounting (Certificate No: PRAJEBA113398ROH), March 2024.
    - 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*:
    - **Quantitative Finance & Risk:** Portfolio Optimization, Monte Carlo Simulations, Risk Analytics, Pyfolio, Modern Portfolio Theory
    - **Programming & Scripting:** Python, SQL, PySpark, CUDA, HTML5, CSS3, JavaScript, R
    - **Libraries & AI Tools:** Pandas, NumPy, Scikit-learn, PyTorch, Pyomo, Mistral, LLaMa3, PyMuPDF, Gemini AI, Prompt Engineering
    - **APIs and Integration:** OAuth 2.0, Postman, Rest API
    - **Data Science & Machine Learning:** Machine Learning, Deep Learning, Tensorflow, SHAP, Predictive Models, Time Series Forecasting (SARIMAX, GARCH, Prophet), Natural Language Processing, Generative AI, Semantic Search, Sentiment Analysis, Feature Engineering, Statistical Modeling, Model Evaluation, Exploratory Data Analysis (EDA), A/B Testing, t-test, ANOVA
    - **Data Engineering & Automation:** Extract Transform Load (ETL), Data Pipelines, Automation, Data Integration, Linear Optimizations, Non-Linear Optimizations, GPU Programming, MLOps, Docker
    - **Business Intelligence & Reporting:** Tableau, Power BI (DAX), Excel, Access, SAS Studio, SAS Enterprise Miner, Lucid Chart
    - **Cloud & Database Warehousing:** Snowflake, AWS, SQL Server, Relational Databases, Big Data, Oracle, Data Warehousing
    - **Project Management & Collaboration:** Agile, Scrum, CI/CD, Kanban, JIRA, GitHub, KPI Reporting, MS Project, Sharepoint