Achyut Sridhar Kulkarni

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Impact-focused Data Scientist who applies advanced statistical modeling, machine learning, and data storytelling to extract insights from large datasets and deliver predictive solutions with measurable business outcomes.

PROFESSIONAL EXPERIENCE

Data Scientist Intern, If You Know You Know, Inc. (Jorts)   *August 2025 - Present*
- Increased targeted event engagement 28% by deploying a Scikit-learn/XGBoost model predicting user interactions, integrated into backend APIs for live personalization.
- Reduced churn in pilot markets 15% through geospatial clustering of community activity with dynamic recommendation tuning.
- Cut feature release cycles from 2 weeks to 4 days by building real-time Power BI dashboards and interactive Plotly visuals for product/engineering teams.
- Enhanced in-app media quality via a computer vision module to filter, enhance, and standardize user-uploaded media.
- Improved recommendation relevance by embedding ML insights into the UI in collaboration with front-end developers.

Data Scientist, Megh Computing   *August 2020 - March 2023*
- Cut AI inference latency 40% by optimizing pipelines with TensorRT and OpenVINO, improving real-time surveillance.
- Raised anomaly detection accuracy 25% by fine-tuning YOLOv5 and Faster R-CNN, enabling faster threat identification.
- Improved deployment efficiency 30% by building AWS/GCP cloud–edge AI solutions for bandwidth-constrained environments.
- Boosted system throughput 60% through FPGA/GPU-accelerated pipelines, ensuring stable high-volume video processing.
- Reduced client integration time 35% by leading Megh's VAS, enabling seamless embedding of custom AI capabilities.
- Shortened debugging cycles 50% by automating CI/CD-driven benchmarking for post-deployment monitoring.
- Delivered AI deployments for retail, finance, and smart cities, aligning solutions to sector-specific KPIs.
- Accelerated new-hire ramp-up ~4 weeks by creating onboarding frameworks for knowledge transfer.

TECHNICAL SKILLS

- **Programming:** Python (pandas, scikit-learn, TensorFlow, PyTorch, NLTK, SpaCy), R, SQL, PySpark, Java, C++, C
- **Machine Learning & Modeling:** Predictive Modeling, Classification, Regression, Anomaly Detection, Time Series Forecasting, Statistical Process Control, Model Evaluation (BLEU, Perplexity), Hyperparameter Tuning
- **Data Science & Analytics:** Exploratory Data Analysis (EDA), A/B Testing, Statistical Analysis (ANOVA, Chi-Square), Feature Engineering, Data Storytelling, Experimental Design
- **Cloud & DevOps:** AWS (EC2, S3, SageMaker), GCP, Docker, CI/CD, Git, Databricks, Snowflake
- **Data Engineering & Databases:** ETL/ELT, Data Modeling, Airflow, Apache Spark, Performance Optimization, Large-Scale Data Processing, PostgreSQL, MySQL, MongoDB, Redis
- **Data Visualization & Reporting:** Power BI, Tableau, ArcGIS, ArcGIS StoryMaps, JMP Pro, Dashboards, Reporting Automation
- **Natural Language Processing:** Text Classification, TF-IDF, Sentiment Analysis, LLM Integration (CodeGen2), Transformers

EDUCATION

- **Master of Science in Data Science,** Rochester Institute of Technology   *August 2023 - May 2025*
- **Bachelor of Engineering in Information Science and Engineering**, BNM Institute of Technology   *August 2016 - August 2020*

PROJECTS

Autonomous Vehicle Safety (Explainable AI) | *Python, OpenCV, TensorFlow, CRAFT, TCAV -* Link
Collaborators: Toyota Research Institute, University of Florida, University of California Irvine
- Developed explainable AI pipelines using CRAFT and TCAV to interpret object detection in AVs, analyzing over 10,000 images.
- Reduced false positive braking events by 31%, improving model transparency for real-time safety-critical decisions.
- Boosted pedestrian detection accuracy by 18%, supporting safer AV navigation across urban driving simulations.

Statistical Analysis of Online Sales Data | *Python, Pandas, SciPy, ANOVA, Chi-Square -* Link
- Analyzed over 1.2M transaction records using statistical methods to uncover purchase trends by region, product type, and users.
- Identified key factors influencing sales conversions, leading to a 15% improvement in pricing strategy accuracy and 12% increase in seasonal campaign ROI.
- Delivered executive dashboards summarizing insights, used by leadership to inform quarterly marketing and inventory plans.

Marketing Strategy Optimization (GIS + Data Viz) | *ArcGIS, StoryMap, Python, Data Visualization -* Link
- Mapped and analyzed customer engagement data in 5 marketing zones, identifying underperforming areas with a 25% lower ROI.
- Implemented spatial targeting strategies that increased regional customer engagement by 30% and marketing ROI by 18%.
- Created interactive visualizations using ArcGIS StoryMap to present findings to stakeholders, improving planning efficiency.

ACCOMPLISHMENTS

Winner – SCB Business Analytics Competition 2025
- Recommended Claude 3 as RIT's AI platform by evaluating LLMs (Claude 3, GPT-4, Mistral) across 7 strategic benchmarks, including cost, performance, privacy, and fairness.
- Led technical analysis and stakeholder alignment, resulting in a first-place win for presenting a scalable, compliant AI roadmap tailored to higher education.

Published Research: *Application to Detect Skin Cancer using CNN* | **IJLTET, 2020** - Link
- Achieved 82% classification accuracy by developing and training a MobileNet based deep learning model for melanoma detection, leveraging dermoscopic image datasets to assist early clinical diagnosis.
- Demonstrated real-world applicability by validating the model's performance against dermatological benchmarks.