Achyut Sridhar Kulkarni

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Data Scientist with an M.S. in Data Science from RIT and 3 years of professional experience applying statistical methods, machine learning, and cloud-based analytics to solve real-world problems. Proven track record of translating data into actionable insights and business outcomes across industries including security, retail, and healthcare.

PROFESSIONAL EXPERIENCE

Data Scientist, Megh Computing August 2020 – March 2023

- Reduced AI inference latency by 40% by optimizing object detection pipelines using TensorRT and OpenVINO, enhancing real-time surveillance capabilities.
- Improved anomaly detection accuracy by 25% through fine tuning YOLOv5 and Faster R-CNN models, facilitating quicker threat identification.
- Enhanced deployment efficiency by 30% by engineering cloud-edge AI solutions on AWS and GCP, reducing operational overhead in bandwidth sensitive environments.
- Increased system throughput by 60% via FPGA/GPU accelerated model pipelines, ensuring consistent performance for high volume video feeds.
- Decreased integration time by 35% by leading the development of Megh's Video Analytics SDK, enabling clients to embed custom AI capabilities seamlessly.
- Streamlined post-deployment monitoring by automating CI/CD driven performance benchmarking pipelines, cutting debugging cycles by 50%.
- Delivered tailored AI solutions across retail, finance, and smart city sectors, aligning deployments with sector specific KPIs.
- Led technical onboarding processes, establishing knowledge transfer frameworks that reduced new hire ramp up time.

TECHNICAL SKILLSz

- **Languages:** Python, R, SQL, PySpark, Bash, Java, C++
- **Statistical Methods:** Regression, ANOVA, Chi-Square, Hypothesis Testing, A/B Testing, Time Series Analysis
- **ML & Analytics:** scikit-learn, TensorFlow, XGBoost, LightGBM, PCA, Clustering, Predictive Modeling
- **Data Analytics Tools:** Pandas, NumPy, SciPy, Statsmodels, JMP Pro, Tableau, Power BI
- **Cloud Platforms:** AWS (EC2, S3, SageMaker), GCP, Databricks, Docker, CI/CD
- **Visualization & Reporting:** Tableau, Power BI, Matplotlib, Seaborn, ArcGIS, StoryMap
- **Databases & Engineering:** MongoDB, PostgreSQL, MySQL, Redis, Apache Spark, ETL Pipelines

EDUCATION

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

PROJECTS

Autonomous Vehicle Safety (Explainable AI) | *Python, OpenCV, TensorFlow, CRAFT, TCAV*
Collaborators: Toyota Research Institute, University of Florida, University of California Irvine

- Developed XAI pipelines using CRAFT and TCAV to interpret object detection models in autonomous vehicles.
- Reduced false positive braking events by providing model transparency, improving safety critical decisions.
- Enhanced pedestrian detection accuracy, contributing to safer AV navigation systems.

Statistical Analysis of Online Sales Data | *Python, Pandas, SciPy, ANOVA, Chi-Square*

- Applied regression, ANOVA, and chi-square tests to identify significant sales trends and customer behavior patterns.
- Delivered actionable insights supporting data driven marketing and pricing decisions, leading to improved revenue forecasting.

Marketing Strategy Optimization (GIS + Data Viz) | *ArcGIS, StoryMap, Python, Data Visualization*

- Transformed raw marketing data into spatial insights using StoryMap, identifying high engagement zones and campaign gaps.
- Drove improved customer targeting and regional strategy optimization, directly increasing marketing ROI and engagement rates.

ACHIEVEMENTS

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 to Paper

- 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.