Achyut Sridhar Kulkarni

+15853036007 | achyutsridharkulkarni@gmail.com | achyutkulkarni.github.io
linkedin.com/in/achyutsk | github.com/AchyutKulkarni

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.

NLP intern, ThoughtClan technologies   January 2019 – February 2019

- Developed conversational AI modules to enhance user interaction with virtual assistants, optimizing dialogue flow using TensorFlow and custom NLP pipelines.
- Refined classification models and training data to boost natural language understanding, increasing response accuracy.
- Contributed to real-time AI responsiveness by preprocessing data and tuning models, supporting faster query resolution.

TECHNICAL SKILLS

- **Languages & Scripting:** Python, R, Java, C++, C, SQL, PySpark, Bash
- **Data Science & Analytics:** Statistical Analysis, Regression, ANOVA, Chi-Square, Time Series, A/B Testing, EDA, Data Visualization, ArcGIS, ArcGIS StoryMaps, Tableau, Power BI, JMP Pro
- **NLP & Text Analytics:** SpaCy, NLTK, TextBlob, TF-IDF, Sentiment Analysis, Classification Models
- **Cloud & Databases:** AWS (EC2, S3, SageMaker), GCP, Docker, CI/CD, Git, Databricks, MongoDB, MySQL, PostgreSQL, Redis
- **Data Engineering:** ETL/ELT Pipelines, Data Modeling, Airflow, Performance Optimization, Apache Spark

EDUCATION

- **Master of Science in Data Science,** Rochester Institute of Technology   Expected 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*

- 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.

Job Posting Classification using NLP | *Python, Scikit-learn, NLP*

- Designed and trained an NLP model to classify job listings as genuine or fraudulent, achieving 75% accuracy.
- Automated fraud detection at scale, reducing exposure to scams and improving user trust on job platforms.

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, providing a lightweight solution suitable for mobile and edge deployment.