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PROFESSIONAL EXPERIENCE

Data Scientist, Megh Computing August 2020 – March 2023

- **Reduced AI inference latency by 40%** by optimizing object detection pipelines with TensorRT and OpenVINO, directly enhancing real-time surveillance for enterprise-grade security systems.
- **Boosted anomaly detection accuracy by 25%** by fine-tuning YOLOv5 and Faster R-CNN models, enabling faster threat identification across smart city and retail deployments.
- **Improved deployment efficiency by 30%** by engineering cloud-edge AI solutions on AWS and GCP, minimizing operational overhead for clients with bandwidth-sensitive environments.
- **Enhanced system throughput by 60%** through FPGA/GPU-accelerated model pipelines, ensuring consistent performance at scale for high-volume video feeds.
- **Cut integration time by 35%** by leading the development of Megh's Video Analytics SDK, empowering clients to embed custom AI capabilities into their infrastructure with minimal friction.
- **Streamlined post-deployment monitoring** by automating CI/CD-driven performance benchmarking pipelines, reducing debugging cycles by 50% and improving engineering velocity.
- **Delivered AI solutions across verticals** (retail, finance, smart cities), tailoring deployments to meet sector-specific KPIs and accelerating time-to-value for customers.
- **Led technical enablement for new hires**, building onboarding processes and knowledge transfer frameworks that scaled team productivity and reduced ramp-up time.

NLP intern, ThoughtClan technologies January 2019 – February 2019

- Developed conversational AI modules to improve user interaction with a virtual assistant, optimizing dialogue flow and intent recognition using TensorFlow and custom NLP pipelines.
- Enhanced the assistant's natural language understanding capabilities by refining classification models and training data, increasing response accuracy and relevance.
- Contributed to real-time AI responsiveness through data preprocessing and model tuning, supporting faster query resolution and a smoother end-user experience.

TECHNICAL SKILLS

- **Languages & scripting:** Python, R, Java, C++, C, SQL, PySpark, Bash
- **Data Science & analytics tools:** 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 & databses:** 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 in real world driving.
- Enhanced pedestrian detection and classification accuracy, contributing to safer and more reliable 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 that supported data driven marketing and pricing decisions, leading to improved revenue forecasting.

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

- Designed and trained a natural language processing model to classify job listings as genuine or fraudulent, achieving 75% accuracy.
- Helped reduce exposure to scams and improved user trust on job platforms by automating fraud detection at scale.

Code Review Optimization | *Python, Neural Networks, NLP*

- Built a neural network model to classify commit messages for code refactoring detection, achieving 95.7% accuracy.
- Reduced manual review effort in engineering pipelines, increasing productivity and consistency in code quality control.

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.