MALLIKARJUN AITHA

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PROFESSIONAL SUMMARY

Data professional with expertise in GIS spatial analysis, ETL pipelines, and cloud-based data solutions. Proven success in optimizing data workflows and delivering insights through tools like ArcGIS, Spark, and AWS. Adept at collaborating with cross-functional teams to solve complex data challenges.

TECHNICAL SKILLS

Programming: Python, SQL, R, Shell Script
Data Engineering: Apache Spark, AWS (Athena, S3), Azure, Databricks, Kafka, Hadoop

GIS Tools: ESRI ArcGIS, GeoPandas
Visualization: Power BI, Tableau, Matplotlib
Cloud Platforms: AWS, Azure

PROFESSIONAL EXPERIENCE

Center for Analytics, University of New Haven
GIS Research Assistant   Oct 2024 - Present
- Conducted crime pattern analysis for NHPD using ArcGIS, Python, and SQL, leveraging spatial clustering models like DBSCAN and Hot Spot Analysis (Getis-Ord Gi*) to identify high-crime areas and improve resource allocation by 20%.
- Built automated ETL pipelines with Python, AWS Lambda, and PostgreSQL/PostGIS to streamline NHPD crime data ingestion, integrating predictive models to forecast incident trends, and reducing manual processing by 15 hours/month.
- Developed 10+ interactive dashboards using ArcGIS Online, Power BI, and JavaScript (ArcGIS API), visualizing NHPD crime hotspots and time series forecasts with ARIMA and Random Forest models for proactive policing.

Downtown Evening Soup Kitchen Inc.
Data Analyst Intern   June 2024 - Dec 2024
- Designed and implemented ETL workflows to consolidate donor data, PantrySoft inventory, and resources, improving data accuracy by 30% and operational efficiency.
- Created and optimized Power BI dashboards to visualize key performance indicators (KPIs) like meal distribution efficiency and volunteer retention, integrating data from PantrySoft for real-time insights and improved decision-making.

Cognizant Technology Solutions
Software Associate   Sept 2021 - July 2023
- Addressed 200+ routine service requests for GCS Cardshop from business users across 15+ nations, managing data-driven UI updates for AMEX bank webpages across APAC, EMEA, LACC, and US regions, increasing card product visibility by 110%.
- Handled an Online Enrollment Tool product and created 125+ zero-escalation American Express data-driven promotional campaigns globally using AEM, JSON, React.js, HTML, and Putty, which helped reduce offline promotions by 56%.

TECHNICAL PROJECTS

Real-Time Smart City Monitoring (AWS, Spark, Kafka)

Built a streaming pipeline using AWS, Spark, and Kafka to process 10k+ IoT data points/day, reducing latency by 40%. Visualized traffic patterns in Power BI, enabling urban planners to optimize congestion management.

GIS Crime Hotspot Analysis (ArcGIS, Python)

Developed a live crime dashboard for NHPD using ArcGIS, Python, Power BI, and JavaScript (ArcGIS API), incorporating raster and vector analysis to visualize real-time crime hotspots, enabling law enforcement to track incidents and allocate resources efficiently.

InceptFace (Facenet-pytorch, Gradio)

Developed a facial recognition system using InceptionResNetV1 and MTCNN for detection, with a custom dataset and robust preprocessing, trained using Adam optimizer and Cross Entropy Loss, deployed via Gradio.

EDUCATION & CERTIFICATIONS

M.S. in Data Science

University of New Haven | GPA: 3.8/4.0

Bachelor's in Electronics and Communication Engineering

Jawaharlal Nehru Technological University Hyderabad

EXTRACURRICULAR ACTIVITIES

Treasurer, Indian Student Council @UNewHaven

Go-Getter Award from Graduate Office, UNewHaven

Campus Connector, UNewHaven