

# 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

<b>Programming:</b> Python, SQL, R, Shell Script	<b>GIS Tools:</b> ESRI ArcGIS, GeoPandas
<b>Data Engineering:</b> Apache Spark, AWS (Athena, S3), Azure, Databricks, Kafka, Hadoop	<b>Visualization:</b> Power BI, Tableau, Matplotlib
	<b>Cloud Platforms:</b> AWS, Azure

## PROFESSIONAL EXPERIENCE

### Center for Analytics, University of New Haven

**Research Assistant** Oct 2024 - Present

- Conducted crime analysis for NHPD using ArcGIS, Python, and SQL, leveraging clustering models like DBSCAN and Hot Spot Analysis (Getis-Ord Gi\*). Identified high-crime areas and improved resource allocation by 20%.
- Built automated ETL pipelines with Python, AWS Lambda, and PostgreSQL, streamlined NHPD crime data ingestion, integrated predictive models to forecast trends, and reduced 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 ETL workflows to consolidate donor data, improving accuracy by 30% and operational efficiency.
- Built a predictive analytics pipeline using Python (Pandas, Scikit-learn), SQL, and Power BI to forecast donation trends, optimizing inventory management, and reducing food waste by 25%.
- Optimized 5+ Power BI dashboards to track KPIs like meal distribution efficiency and volunteer retention, integrating PantrySoft, SQL, and Python for real-time insights, improving decision-making by 30%.

### Cognizant Technology Solutions

**Software Associate** Sept 2021 - July 2023

- Addressed 200+ service requests for GCS Cardshop from users across 15+ nations, managing data-driven UI updates for AMEX webpages across APAC, EMEA, LACC, and US, increasing card visibility by 110%.
- Managed an Online Enrollment Tool, creating 125+ campaigns and reducing offline promotions by 56%.
- Automated data validation and UI content deployment using Python, Shell Scripting, React.js, HTML, Putty, Git, and CRM tools, reducing manual effort by 40% and ensuring seamless updates across global AMEX platforms.

## 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, integrating raster and vector analysis to visualize crime hotspots, aiding law enforcement in tracking incidents and allocating resources.

### 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

### M.S. in Data Science

University of New Haven | GPA: 3.8/4.0 | May 2025

### Bachelor's in Electronics and Communication Engineering

Jawaharlal Nehru Technological University Hyd | Sept 2021

## EXTRACURRICULAR ACTIVITIES

Treasurer, Indian Student Council @UNewHaven

Go-Getter Award, UNewHaven

Campus Connector, UNewHaven