

# MALLIKARJUN AITHA

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## PROFESSIONAL SUMMARY

Data professional with expertise in Data Engineering, Data Analysis, 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**

**Geospatial Data Analyst**

**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, which helped manage inventory better and reduced 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**

**Associate Data Engineer**

**Sept 2021 - July 2023**

- Managed 200+ service requests for GCS UI Cardshop across 15+ countries, optimizing multilingual webpage updates and leveraging technologies like React.js, AEM, and AWS to enhance card product visibility by 110%.
- Developed and deployed 125+ AMEX promotional campaigns using AEM, JSON, React.js, and CI/CD pipelines, automating online enrollment and reducing offline promotions by 56%.
- Automated data validation, UI updates, and content deployment with Python, Putty, Shell Scripting, Git, Docker, and cloud-based CRM tools, reducing manual effort by 40% and streamlining global web rollouts.

## 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

**Master'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