SAHITHI MADAS

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EDUCATION

Master of Science in Data Science: University at Albany, State University of New York — **Expected Dec 2025**

Bachelor of Technology in Computer Science: Andhra University College of Engineering — **Aug 2019 - May 2023**

PROFESSIONAL EXPERIENCE

Data Engineer Intern, Graduate Fellow | Albany County Local Govt – Division of Information Services — Sep 2024 - Present

- Analyzed and reviewed IT policies and data protocols, contributing to the modernization of the county's information security strategy and aligning it with NIST, ISO cybersecurity standards.
- Implemented secure SFTP pipelines for internal and inter-departmental data sharing, ensuring compliance with NY state regulations and reducing data transmission latency by 60%.
- Collaborated with cross-functional government teams, including cybersecurity, compliance, GIS units, to unify data governance efforts, enhancing audit traceability and transparency.
- Designed and simulated a cloud data lake migration plan using AWS (S3, Glue, Redshift), to support scalable analytics and centralized data access across departments.

Data Analyst Student Intern | New York State – Department of Health (Environment Protection) — May 2024 - Aug 2024

- Engineered an Interactive Health Insights Platform by designing 15+ dynamic Tableau dashboards, integrating SQL-based to visualize environmental health metric across countries, enabling data-driven policy planning and accelerating public health reporting by 40%.
- Worked on large-scale health datasets, optimizing SQL queries to clean, validate, and extract critical data from 10,000+ records, for environmental compliance.
- Built a dashboard prototype in Tableau to visualize county-level health and environmental trends – simulating & synthesizing environmental KPIs into stakeholder-ready insights for decision-makers.

Software Development Engineer, Graduate Student Assistant | UAlbany — Feb 2024 - Present

- Developed interactive dashboards using Power BI and Tableau across research initiatives and to analyze digital resource usage.
- Automated data analysis workflows in Python and R, streamlining preprocessing, statistical summaries, and visual reporting for cross - disciplinary projects.
- Built VR-enabled 3D visualization prototype using Unity and C#, simulating immersive spatial analytics to support research exploration.
- Advised 100+ researchers and students on data visualization strategy, insight extraction, and dashboard storytelling, improving data aliteracy and documentation readiness.

Full Stack Web Developer Intern | APSSDC — May 2021 - Jul 2021

- Developed a responsive civic engagement portal using HTML, CSS, JS, Python (Flask), and SQL, digitizing Village Council services.
- Automated backend data flows and integrated real-time usage analytics, supporting public service tracking and administrative transparency.

PROJECT

AutoPrice Predictor

- Built a predictive analytics tool for used cars resale prices with high-precision Regression model using achieving 79.20% test accuracy.
- Engineered end-to-end data pipeline with PySpark, Pandas, and advanced encoding techniques for cleaning, feature transformation, handling outliers/missing values across 10K+ car listings.

Analysis of Natural Disaster and Risk Management

- Using statistical tests (Kruskal-Wallis, ANOVA) performed EDA, geospatial analysis with Python.
- Developed a Regression based predictive model to assess disaster likelihood, providing recommendations to targeted interventions

Road Lane Detection System

- Using OpenCV and Python, processing live video frames from simulated driving environments with over 95 % edge accuracy.

SKILLS

- **Programming languages:** Python, Java, R, C#, Go, AI libraries, HTML & CSS, JavaScript, NodeJS, React, Angular, D3.js.
- **Database:** MySQL, NoSQL (MongoDB), Oracle, MongoDB, AWS RDS, AWS S3, AWS Lambda, Azure, GCP.
- **Software Tools and IDE:** Cursor AI, Oracle Cloud Infrastructure, AWS (ECS, RDS, S3, Lambda), Kubernetes, Docker, Terraform, Helm, API Gateway, Databricks (Data Preprocessing), Power BI, Tableau, Microsoft Excel.
- **Monitoring & Debugging:** DataDog, Splunk, Databricks, Prometheus.
- **Testing & CI/CD:** JUnit, PyTest, Selenium, Jenkins, GitHub Actions, CI/CD pipelines, Circle CI, TravisCI, DevOps.

CERTIFICATES

Google Data Analytics Professional Certificate | Google

Introduction to Tableau | DataCamp

Model Data in Power BI | Microsoft

Becoming AWS Cloud Practitioner | AWS Digital Training

Secure Azure AI Services Badge | Microsoft Learn

Google Analytics | Google Analytics Academy

Introduction to Machine Learning | AWS