Lokesh Kanna Rajaram

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EDUCATION

University at Buffalo, The State University of New York **Buffalo, NY, USA**
Master of Science *Dec 2025*

- **Concentrations:** Engineering Science - Data Science
- **Coursework:** Numerical Mathematics, Introduction to Probability, Statistical Data Mining, Database Fundamentals.

Anna University **Chennai, India**
Bachelor Of Engineering *Graduated, April 2023*

- **Concentrations:** Geoinformatics
- **GPA:** 8.20/10.00, *First Class*
- **Coursework:** Data Structures & Algorithms, Satellite Weather Forecasting and Modelling, Computer Organization & Programming, Satellite Image Processing, Object-Oriented Programming, Decision Support System, Database Management System.

PROJECTS

CHATBOT USING AMAZON LEX

- Developed an interactive chatbot with dynamic content handling as measured by successful third-party API interactions, by using Amazon Lex and integrating it with AWS Lambda.
- Enhanced chatbot functionality and session management as measured by improved user interaction and data storage capabilities, by utilizing Amazon S3, DynamoDB, and Amazon Polly for text-to-speech features.
- Ensured accurate responses and a seamless user experience as measured by extensive testing, debugging, and performance monitoring, by leveraging AWS CloudWatch for continuous monitoring and optimization.

MACHINE LEARNING MODEL MONITORING USING AIRFLOW AND DOCKER

- Developed an automated pipeline with Apache Airflow and Docker to monitor machine learning models resulting in a 30% reduction in manual intervention and deployment issues.
- Implemented logging and alerting mechanisms within Airflow to provide real-time notifications and performance checks which increased model reliability and response times.
- Containerized the model monitoring application using Docker to ensure consistent and reproducible environments leading to a 20% decrease in deployment issues.

TEXT SUMMARISER

- Accomplished scalable and secure text summarization deployment as measured by high availability and optimized performance, by utilizing AWS services (EC2, IAM) and conducting thorough performance tuning.
- Achieved streamlined and automated deployment process as measured by reduced manual intervention and faster release cycles, by implementing CI/CD pipeline with GitHub Actions and leveraging Docker for containerization.
- Delivered a robust and user-friendly summarization tool as measured by seamless integration and continuous delivery, by configuring and managing EC2 instances, automating deployment workflows, and collaborating with team members.

TIME SERIES ANALYSIS OF GROUNDWATER CHANGE USING GRAVITY RECOVERY AND CLIMATE EXPERIMENT

- Accomplished comprehensive data wrangling as measured by successful handling of GLDAS, NetCDF, and GeoTIFF data, by using Python and Panoply and visualizing the data with ArcMap and Quantum GIS.
- Identified an average groundwater declination of 5.877 cm per year as measured by analysis of GRACE satellite data, by examining changes in groundwater levels across the Cauvery River basin from 2003 to 2022.
- Predicted a mean annual variation in groundwater thickness of approximately -26.179 cm as measured by detailed study over the period from 2003 to 2022, by analyzing and modeling the data to determine significant groundwater changes.

SKILLS

Programming Languages & Databases: Python, R, SQL, MongoDB.
Tools: AWS, Docker, Kubernetes, Flask, Streamlit, Gradio, GitHub, Git, Google Colab, Jenkins, Jupyter
ML Frameworks: PyTorch, Seaborn, Sklearn, NumPy, Pandas, Keras, TensorFlow, NLTK