

# Lokesh Kanna Rajaram

[rajaram@buffalo.edu](mailto:rajaram@buffalo.edu) | [Portfolio](#) | [Linkedin: Lokesh kanna](#) | [GitHub: Lokeshkanna7](#)

## EDUCATION

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### University at Buffalo, The State University of New York

Buffalo, NY, USA

Master of Science

Aug 2024 – Present

- **Concentrations:** Engineering Science - Data Science
- **GPA:** /4.00
- **Related Coursework:** Numerical Mathematics, Introduction to Probability, Statistical Data Mining (Supervised & Unsupervised Learning), Database Fundamentals.

### Anna University

Chennai, India

Bachelor Of Engineering

Graduated, April 2023

- **Concentrations:** Geoinformatics
- **GPA:** 8.20/10.00, *First Class*
- **Related Coursework:** Data Structures & Algorithms, Satellite Weather Forecasting and Modelling, Computer Organization & Programming, Satellite Image Processing, Object-Oriented Programming, Machine Learning, Deep Learning.

## PUBLICATIONS

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### CROP YIELD ESTIMATION USING MACHINE LEARNING AND REMOTE SENSING – IEEE (Under Review)

- Conducted a comprehensive study on yield estimation in Tamil Nadu, using NDVI and EVI indices in conjunction with temperature, precipitation, and humidity data.
- Examined crop yield using a Convolutional Neural Network, incorporating spatio-temporal and meteorological parameters.

## PROJECTS

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

#### EXPERIMENT

Team Lead

Dec 2022 – Apr 2023

- Wrangled the GLDAS, NetCDF, GeoTIFF data using Python and Panoply. Visualized using ArcMap, Quantum GIS.
- Analyzed the change in Groundwater using GRACE satellite system. An average groundwater declination of 5.877 cm per year was identified across the Cauvery River basin from the period of 2003 to 2022.
- Predicted the mean annual variation in groundwater thickness registers a notable magnitude, specifically amounting to approximately -26.179 centimeters throughout the comprehensive study duration spanning from 2003 to 2022.

### MICROWAVE D-InSAR TECHNIQUE FOR ASSESSMENT AND MONITORING OF SURFACE SUBSIDENCE

Team Member

- Adapted the Differential Interferometry Synthetic Aperture Radar (D-InSAR) technique to assess and monitor the surface subsidence.
- Quantified the subsidence rates as 5.40 cm from December 2022 to January 2023 and 27.30 cm from October 2014 to February 2023.

## CERTIFICATIONS

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### IBM Data Science Professional -Coursera

- Predicted the Seoul weather and bike sharing demand using Linear Regression. Data were obtained through HTTP request from Open Weather API and Web scraped data from Wikipedia.

### Machine learning for Earth Science System

IIT Kharagpur

- Machine Learning and Deep Learning techniques (Bayesian Networks, CNN, RNN/LSTM, VaE, Interpretability).
- Applications in different domains (ML-based surrogate models, deep and shallow generators, long-term forecasting).

## SKILLS

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**Programming:** Python, SQL, R Programming language

**Tools:** Google Studio, PyCharm, AWS, Jupyter Notebooks, Git, Docker, ArcMap, SNAP, Google Earth Pro