Lokesh Kanna Rajaram

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EDUCATION

Anna University | **Chennai, India**

Bachelor Of Engineering | *Graduated, April 2023*

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

PROJECTS

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 (DInSAR) 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.

ASSESSMENT OF TEA PLANTATION HEALTH AND YIELD USING REMOTE SENSING AND GIS

Team Member

- Investigated changes in tea plantation status and yield estimation using NDVI and meteorological data.
- Correlation analysis revealed significant impact of meteorological variables (max temperature, min temperature, precipitation, humidity) on tea plantation yield (coefficients: 0.39, 0.74, 0.64, 0.73).
- Utilized a multiple linear regression model for yield estimation, achieving higher accuracy (coefficient of determination: 0.76) compared to a linear regression model, indicating improved predictive power through the use of multiple independent variables.

PUBLICATIONS

- Systematic Literature Review – Linear Optimization Techniques   *Feb 2024 – Present*

- Crop Yield Estimation Using Machine Learning and Remote sensing, IEEE Publication (Under review)

CERTIFICATIONS

Data Science - IBM

- 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

Programming: Python, SQL, R Programming language

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