AISHWARYA V

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Educational Qualification:

Degree	Year of Passing	Institute	Board/University	Percentage/ CGPA
M.Tech (Remote Sensing & GIS)	2022	National Institute of Technology Karnataka	National Institute of Technology Karnataka	9.35
B.E. (Civil Engineering)	2019	Karpagam College of Engineering, Coimbatore (TN)	Anna University	9.32
Class XII	2015	Sree Dharmasastha Matric Hr. Sec School, Coimbatore (TN)	State board	88.4
Class X	2013	Sree Dharmasastha Matric Hr. Sec School, Coimbatore (TN)	State board	93.6

Skills:

Programming	Python, JavaScript, HTML
EO analysis (Python)	GDAL, Xarray, SKLearn, GeoPandas, Shapely, Leaflet
GIS	QGIS, ESRI products (ArcGIS pro), Google Earth Engine, SNAP, Google Earth, ERDAS IMAGINE
Design	3DS MAX, AutoCAD (2D modeling)
Algorithms	Image processing (Wavelet transform), Machine learning (Random Forest, SVM, Regression)
Remote Sensing & GIS	Digitizing, Geo-referencing, Image Classification, Cartography, DEM generation, Optical, SAR & LiDAR datasets

Work Experience:

(October 2022 – August 2023) Azista Industries Pvt Ltd
Designation: Image Processing Engineer

Key responsibilities:

- I'm actively engaged in designing and implementing cutting-edge algorithms for **satellite image classification (LULC)** and **change detection** utilizing Python and JavaScript.
- I've engaged in projects involving the classification of land use and land cover (LULC) and crop types using optical satellite imagery.
- I have built a rule-based algorithm that utilizes vegetation and water spectral indices to accurately mask water.
- I possess hands-on experience in utilizing Google Earth Engine to effectively **monitor flood affected regions and forest cover changes**.
- I have applied **image enahancement** techniques like image normalization, histogram equalization, and histogram matching to improve the quality and clarity of the images analyzed.

Project:

- **PG Project (Major) – A study on crop rotation assessment using DWT analysis on Sentinel-1 SAR data** *(2022)*
  - I have mapped crop rotation using Sentinel-1A mission SAR data.
  - Crop classification in **Google Earth Engine** software helped in easier analysis of vast number of datasets.
  - The temporal backscattering behavior of croplands depicts the crop growth stages and helped in mapping crop rotation pattern in an agricultural land.

- **PG Project (Minor) – Identifying municipal solid waste dumping site location using AHP and GIS techniques: A Study of Coimbatore district, India** *(2021)*
  - The objective of this project was to determine suitable alternate dumping sites in the Coimbatore district to fulfill the present needs.
  - Potential dumping sites are selected based on nine different criteria and priority of each criteria is assigned with the help of **Analytical Hierarchical Process (AHP)** technique.

Internship:

- **National Remote Sensing Centre (NRSC), ISRO, Hyderabad** *(2021)*
  Determined river water parameters using Landsat series data on River Godavari under the supervision of Mr. J. Srinivasulu, Sci/Eng 'SG'. Remotely sensed data and **Google Earth Engine** software helped in estimating water level and discharge based on satellite images.

Areas of Interest:

- Data Science
- GIS/Spatial Analysis
- Develop algorithms

Academic Achievements and Co-Curricular Activities:

- Scored **455** in the GATE 2020-Civil Engineering.
- Certified in **'Google Earth Engine for Land Monitoring Applications'** by NASA-ARSET *(2021)*
- Certified in **'Remote Sensing & GIS'** by NPTEL (Elite + Silver). *(2020)*
- Certified in **'Professional in Architectural Design'** by CADD Centre. *(2017)*

Extracurricular Activities:

- Participated in Map-making contest held by **IITB-ISRO-AICTE Mapathon** 2020.
- **Presented research article** "Experimental study on Reactive Powder Concrete with composite fibers" at ICMBS[1] conference 2019.

Publications:

- Aishwarya V, Shaik Salma, and B. M. Dodamani. (2022) "Identifying Municipal Solid Waste Dumping Site Location Using AHP and GIS techniques: A Case Study of Coimbatore district, India" *Journal of the Indian Society of Remote Sensing.* https://doi.org/10.1007/s12524-022-01605-9

- Jeganmurugan P, Gopalan A, and Aishwarya V. (2019) "Reactive Powder Concrete with Composite Fibres" *International Journal of Innovative Technology and Exploring Engineering (IJITEE).*

- Shaik Salma, Aishwarya V, and B. M. Dodamani. (2022) "A study on temporal crop growth patterns assessment using Sentinel-1A SAR data". (submitted)

[1] International Conference on Mechanical and Building Sciences (ICMBS)