Aswathi Mundayatt Valappil

International Institute of Information Technology, Bangalore

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Education

International Institute of Information Technology, Bengaluru **2022 – Present**
PhD in Computer Science (Transitioned from MS to PhD in Aug'24), Supervisor: Dr. Jaya Sreevalsan Nair

Manipal Academy of Higher Education (MAHE), Manipal, KA **2019 – 2021**
M.Tech in Construction Engineering and Management, Supervisor: Prof. Shriharsha

Visvesvaraya Technological University, Belgaum **2014 – 2018**
B.E in Civil Engineering

Experience

CMR Institute Of Technology **October 2021 – July 2022**
Teaching Assistant(Assistant Professor), Department of Civil Engineering *Bengaluru, KA*

Larsen and Toubro, BIAL T2 Project **September 2020 – May 2021**
Intern in Public Health Engineering(PHE) Department *Bengaluru, KA*

TROJAN Contracting LLC **January 2016**
Project Intern *Abu Dhabi, UAE*

Projects

The Correlates of War-Formal Alliance Visual Analytics | *Python,Tableau* **December 2022**
- Utilized Tableau Software for analyzing Correlates of War Formal Alliance dataset (1816-2012).
- Created visualizations highlighting defense alliances, depicting intricate networks among powerful nations.
- Concluded that formal defense alliances significantly contributed to the escalation of World War I.

Spatial and Temporal Statistical Analysis on Beijing Air Quality Dataset | *Python, QGIS* **May 2023**
- Analyzed hourly air pollutants data, focusing on PM2.5 trends for 2016-2017, using time series decomposition and forecasting techniques.
- Evaluated spatial autocorrelation of PM2.5 concentrations through spatial clustering and statistical measures (Moran's I, Geary's C).
- Integrated spatial and temporal analyses to offer comprehensive insights into repeating PM2.5 concentration patterns, aiming to assist policymakers in informed air quality management decisions.

Technical Skills

Languages: Python, **Technologies/Frameworks:** Google Earth Engine (GEE), QGIS, Tableau

Relevant Coursework

Data Visualization, Machine Learning, Geographic Information Systems, Statistical Techniques for Spatio-Temporal Data Analysis, Digital Image Processing

Leadership / Extracurricular

InGARSS 2023 **December 2023**
WIE/DEI (Women in Engineering/Diversity-Equity-Inclusion) Chair *IIITB,Bengaluru*

Publications

[1] Rahisha Thottolil, Uttam Kumar, Aswathi Mundayatt. "Predicting Urban Expansion Using A Patch-Generating Land Use Simulation (PLUS) Model: A Case Study of Bangalore City, India." In *2023 IEEE India Geoscience and Remote Sensing Symposium (InGARSS)*, 2023, pp. 1-4.

[2] Aswathi Mundayatt, Jaya Sreevalsan-Nair. "Scaling up Study Area Size in Flood Susceptibility Mapping." In *Proceedings of 2024 IEEE International Geoscience and Remote Sensing Symposium (IGARSS)* , 2024.

[3] Jaya Sreevalsan-Nair, Aswathi Mundayatt. "Evolution of Data-driven Single- and Multi-Hazard Susceptibility Mapping and Emergence of Deep Learning Methods." In *IOP Conference Series: Earth and Environmental Science* , April 2024.

[3] Jaya Sreevalsan-Nair, Aswathi Mundayatt, Beryl Gnanaraj, Ancymol Thomas, Naveen C. Kumar, Gajanan Ganapati Sabhahit, Sourabh Joshi, and T. K. Srikanth. "Mental healthcare in the times of climate change action and data science." In *Data-Driven Insights and Analytics for Measurable Sustainable Development Goals*, edited by Tilottama Goswami, Sonal Mobar Roy, and Sabrina Senatore, Elsevier, USA, (accepted).