Aswathi Mundayatt Valappil

International Institute of Information Technology, Bangalore
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Education

International Institute of Information Technology, Bengaluru **Aug. 2022 – Till Date**
MS by Research in Data Science, 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 **Septemeber 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**

- Utilizing Tableau Software, analyzed the Correlates of War Formal Alliance dataset spanning 1816 to 2012, creating visualizations that emphasized defense alliances and showcased the intricate networks among powerful countries, contributing to the escalation of World War I.
- Investigated the pivotal role of powerful countries forming extensive defense alliances in World War I, revealing their significant contribution to the war's escalation by binding nations to mutual military support instead of non-aggression pacts through visualizations.
- Concluded that formal defense alliances played a pivotal role in World War I, demonstrating analytical and visualization skills to extract insights from historical data, thereby enhancing strategic and geopolitical analysis.

Spatial and Temporal Statistical Analysis on Beijing Air Quality Dataset | *Python, QGIS* **May 2023**

- Conducted time series decomposition and utilized forecasting techniques on hourly air pollutants data, focusing on PM2.5 particulate matter trends for 2016 to 2017.
- Performed spatial clustering and applied statistical measures (Moran's I, Geary's C) to assess spatial autocorrelation of PM2.5 concentrations.
- Integrated spatial and temporal analyses to provide comprehensive insights into PM2.5 concentration patterns, aiding policymakers in informed decision-making for air quality management strategies and regulatory control measures.

Publications

Predicting Urban Expansion Using A Patch-Generating Land Use Simulation (PLUS) Model: A Case Study of Bangalore City, India

- Accepted to IEEE India Geoscience and Remote Sensing Symposium (InGARSS), 2023.

Scaling Up Study Area Size In Flood Susceptibility Mapping

- Accepted to IEEE International Geoscience and Remote Sensing Symposium(IGARSS), 2024.

Technical Skills

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

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*