EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2025	M.TECH	IIT Kharagpur	8.30 / 10
2023	B.TECH	Kakatiya Institute of Technology and Science, Warangal	8.48 / 10
2019	HSC	Sri Chaitanya Junior College, Hyderabad	91.60%
2017	SSC	Sri Chaitanya School, Hyderabad	9.70 / 10

PROJECTS

Optimization of Electric Vehicle Charging Station Locations by Integrating Geographical and Network parameters with customized Utility Functions | Prof. Sandeepan Roy and Prof. M.B. Sushma   **[Jul'23 - Present]**
- Integrated **GIS-MCDM-AI-Metaheuristic (PSO Algorithm)** based approach is introduced after **pre-processing** and **discretization** stage.
- Executed **Swarm Intelligence-based PSO Algorithm** in the concluding phase by utilizing discretized spatial zones as input for the model.

Analyzing sustainability of urban sprawl through Urban Heat Island | Prof. Jayanarayanan Kuttippurath   **[Aug'23 - Dec'23]**
- Performed change detection analysis using **Geoprocessing tools** in **GIS** to analyze the spatiotemporal change in LULC classes in Kolkata.
- Scripted **Python** code to analyze annual and seasonal Urban Heat Island (UHI) using **100 raster datasets** of Land Surface Temperature.
- Future scope: Develop a **tool** to automate the analysis and identification of potential geographic locations for **sustainable urban sprawl**.

A Geographic Information System Integrated Multi-Criteria Decision-Making Approach for Optimization Electric Vehicle Charging Station Locations | Prof. M.B.Sushma and Prof. Sandeepan Roy   **[Jun'22 - Jun'23]**
- Formulated a **GIS-MCDM model** intersecting **mathematical analysis** and **Spatial Data Science** to identify optimal EVCS locations.
- Forged a tool by merging existing GIS tools with **spatial information** data sets as input and **optimized CS** location as output.
- Remarkably, **75%** of current CS fall within the service area of Optimized CS when the **CRITIC** method is integrated with **TOPSIS** method.

COMPETITION/CONFERENCE

Student Delegate | 14th International Conference TPMDC | TSE, IIT Bombay   **[Dec'22]**
- **Case study presentation** on *"A Framework on Understanding the Barriers of Smart Cities and Intelligent Transportation Systems in India"*.

Student Delegate | International Virtual Conference SSDUGI | NIT Trichy   **[Mar'22]**
- An **abstract presentation** on *"A Framework on Understanding the Challenges of Smart Cities in India"* focussing on Urbanization in India.

PUBLICATIONS

Sushma, M. B., **Rashmitha, Y.,** &Roy, S. (2022, December). A Framework on Understanding the Barriers of Smart Cities and Intelligent Transportation System in India. In International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (pp. 809-820). Singapore: Springer Nature Singapore.
- Transformed **Landsat-8** data to generate a LULC map through **composite band formation**, **mosaicking**, and **masking** using ArcGIS.
- Highlighted disparities with ground values, **2% forest, 3% crop, 4% built-up** increased and **4% water bodies, 5% barren land** decreased.
- Deduced **SWOT analysis** report to analyze the performance of four concluded **Smart City Mission** projects using LULC classification.

SKILLS AND EXPERTISE

Programming Languages: Python, C, C++, Java | **Libraries**: NumPy, Pandas, Scikit-Learn, Matplotlib **Software:** ArcGIS, QGIS, MATLAB, AutoCAD | Technical Writing | **MS Office** | Optimization and MCDM through **Spatial Data Science** and **Mathematical Analysis**.

CERTIFICATIONS

The Complete Python Bootcamp From Zero to Hero in Python | Udemy   **[Aug'22]**

Python for Data Science, AI and Development | IBM | Coursera   **[Dec'23-Present]**

COURSEWORK INFORMATION

Core Subjects: Satellite Remote Sensing | Global Climate | Physical Oceanography | Weather Analysis &Prediction | Disaster management
Computational Subjects: Probability| Statistics | Algebra | Data Analytics | Computational Methods | Programming | Simulation Lab

POSITIONS OF RESPONSIBILITY

Student Co-Ordinator | Training and Placement cell | KITSW   **[Jan'22 - May'23]**
- Selected in a **team of 24 members** and facilitated 950+ offers for Undergraduate and Postgraduate students from 68 companies.
- Organized preplacement talks and guidance sessions, Co-ordinated companies for recruitment processes including tests and interviews.

Joint Secretary | Games and Sports Club | KITSW   **[Jun'22 - May'23]**
- Managing head for training women players for South-Zone phase of National Basketball Championship2022 camp held at KITSW.
- Elected as **Joint Secretary** and organized District, University and Inter-collegiate level sports competitions which involved 1100+ players.

EXTRA CURRICULAR ACTIVITIES

- Selected as 2nd player for **South-Zone phase of National Basketball Women's Championship 2022** to represent Kakatiya University
- Held the position of **team captain** for the KITSW Basketball team from 2021-2023 for Institute, University and District level competitions.
- Joined Technology Aquatic Society, IIT Kharagpur, driven by a passion for swimming; accomplished a **50m freestyle swim** within 9 days.