

# Sai Ganesh Veeravalli

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## Education

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### PhD Degree

2024 – Present

### Doctor of Philosophy in Risk and Environmental Studies

Karlstad University, Sweden

- Conducting interdisciplinary research in the [DEPRIMAP](#) project, focusing on GEO-AI for mapping and modelling deprived urban areas (DUAs).
- Integrating geospatial data, morphometrics, and machine learning to analyse urban morphology, vulnerability, and risk.

### Master's Degree

2018 – 2020

### Master of Science in Geo-information Science and Earth Observation

ITC, University of Twente, Netherlands

- Mastered GIS and remote sensing applications in urban risk assessment, culminating in a thesis on flood response strategies in Kampala, Uganda.
- Acquired skills in spatial analysis and environmental impact assessment, relevant for urban resilience and sustainability research.

### Bachelor's Degree

2014 – 2018

### Bachelor of Technology with Honors in Civil Engineering

Indian Institute of Technology Gandhinagar, India

- Engaged in projects that addressed urban infrastructure challenges and environmental risk mitigation.

## Employment

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### Doctoral Student

Aug, 24 - Present

### Karlstad University, Sweden

- Researching GEO-AI applications for urban deprivation mapping within the [DEPRIMAP](#) project.
- Teaching courses in geomatics, delivering lectures and hands-on sessions on UAV applications, digital photogrammetry, and remote sensing techniques for spatial analysis.

### Project Scientist I

July, 22 – July, 24

### National Centre for Coastal Research, Ministry of Earth Sciences, Government of India; Chennai, India

- Orchestrated GIS and remote sensing projects to develop shoreline management plans for key states of India, influencing environmental policy and conservation.
  - Integrated geospatial and socio-demographic data for a holistic understanding of coastal dynamics, pertinent to urban resilience.
  - Directed UAV-based data collection, employing advanced analytical techniques to evaluate environmental impacts through technological innovation.
  - Developed a custom web app for efficient field data collection, streamlining the integration of coastal structural and geomorphological data into broader environmental planning efforts.
  - Executed extensive field surveys and fostered cross-sector collaborations, incorporating socio-economic considerations into environmental planning to improve the efficacy of coastal management strategies.
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**Project Associate I**  
Dec, 21 – July, 22

**Wildlife Institute of India, Ministry of Environment, Forestry & Climate Change, Government of India; Dehradun, India**

- Drove interdisciplinary initiatives, developing models for wildlife conservation that align with sustainable urban development and environmental risk assessment.
- Executed comprehensive geospatial analyses to support habitat monitoring, using GIS to inform conservation tactics adaptable to urban ecosystem challenges.
- Led UAV field data collection for conservation projects, applying spatial analysis to enhance habitat monitoring and contribute to sustainable urban development strategies.
- Conducted spatial analyses and integrated diverse datasets for environmental evaluations, vital for understanding urban encroachment on natural landscapes.
- Contributed to research on landscape fragmentation, providing insights into biodiversity conservation amidst urban expansion and infrastructure development.

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## **Journal Publications**

**Veeravalli, S. G.** (2025). Satellite monitoring for post-clearance accountability: lessons from Rushikonda hill. *Discover Cities*, 2(1), 91.

**Veeravalli, S. G.**, Murali, M. G., Subburaj, S., Alluri, S. K. R., Ramanathan, V., & Murthy, M. R. (2025). Integrating coastal protection structures into vulnerability assessments: A case study from Kerala, India. *Ocean & Coastal Management*, 266, 107670.

Murali, M. G., **Veeravalli, S. G.**, Alluri, S. K. R., & MV, R. M. (2025). Statewide field assessment of coastal protection structures in Kerala, India: structural and functional insights. *Journal of Coastal Conservation*, 29(4), 1-21.

**Veeravalli, S.G.**, Chereni, S., Sliuzas, R. V., Flacke, J., & Maarseveen, M. (2022). Factors influencing flood damage mitigation among micro and small businesses in Kampala, Uganda. *International Journal of Disaster Risk Reduction*, 103315.

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## **Selected Conference Publications**

**S.G. Veeravalli**, F. Campomanes, S. Hafner, S. Georganos, M. Kuffer, J. Friesen, D. R Thomson, R. Ndugwa, D. Mwaniki, A. Abascal, P. Elias, T. E. Morakinyo, J. Pedrassoli, G. de Oliveria, A. Boanada-Fuchs, B. Zerjav, J. M. D'Attoli, "Towards a Spatial Measure of SDG 11.1.1: Open Data for Urban Deprivation Mapping" 2025 Joint Urban Remote Sensing Event (JURSE), Tunis, Tunisia, 2025.

**S.G. Veeravalli**, S. Georganos, J. Friesen, J. Haas. "Understanding Slum Dynamics through Spatiotemporal Hotspot Analysis of Google's 2.5D Data". Proceedings in ISPRS Archives of the 8<sup>th</sup> EARSeL Workshop on the Global South. 2025.

**S.G. Veeravalli**, S. Balaganesh, D. Silamaban, S.K.R. Alluri, R. V, U.S. Panda, "UAV based Topographic Survey of Inaccessible Remote Terrains," 2023 IEEE India Geoscience and Remote Sensing Symposium (InGARSS), Bangalore, India, 2023, pp. 1-4, doi: 10.1109/InGARSS59135.2023.10490411.

**Veeravalli, S. G.**, Noujas, V., Ramanathan, V., & Murthy, M. V. R. (2024, January). An integrated GIS methodology for identifying high-risk areas due to damaged coastal protection structures: a case study of Kollam district in Kerala, India. In *Eighth Geoinformation Science Symposium 2023: Geoinformation Science for Sustainable Planet* (Vol. 12977, pp. 371-379). SPIE.