

# Chinna Subbaraya Siddharth (Sid) Ramavajjala

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Links: [🔗 Portfolio](#) [in](#)

## EDUCATION

**University of Wisconsin - Madison | MS in GIS & Cartography** Jan 2022 - Dec 2023 (CGPA: 4.00/4.00)

**Courses:** *Geographic Information Systems (GIS), Cartography, Geocomputing, Advanced Spatial Analysis, Graphic Design in Cartography, Advanced Geocomputing & Geospatial Big Data Analytics, Interactive Cartography & Geovisualization, Design & Development of Spatial Databases\**

**Vignan's University, India | BTech in Engineering** Jul 2015 - Aug 2019 (CGPA: 9.71/10)

**Major:** *Geology, Geography, Probability & Statistics, Health Safety and Environment (HSE), Minor: Project Management, Managerial Economics*

## TECHNICAL SKILLS

**Programming Languages:** Python, HTML, CSS, Bootstrap, JavaScript.

**Geospatial Libraries:** **Python** - Geopandas, GDAL, PDAL, OpenStreetMaps (OSMnx), Arcpy, Shapely, Pyproj, PySAL, rasterio, Whitebox tools\*, reV. **JavaScript** - Leaflet, D3, Mapbox

**Databases:** MongoDB (PyMongo), PostGIS\* & PostgreSQL, ArcSDE, RasDaMan DB\*

**Software Tools:** ArcGIS Pro, ArcMap Desktop, Adobe Illustrator (Ai) for Maps, Advanced Excel, ArcGIS Story Maps, ArcGIS Online (AGOL) Docker, Google Earth Pro, GitHub, MapBox, NeuraMap, NeuraLog, Petrel, QGIS

**Geospatial Analytics:** Digital Terrain Analysis, Point Pattern Analysis, Raster & Vector Bigdata, Network Analysis, Food desert analysis.

## WORK EXPERIENCE

**Computer Science - II Intern (GIS), National Renewable Energy Laboratory** May 2023 - Sep 2023\*

- Collaborated closely with GIS experts and computational science experts to understand the scope, design, and develop Research Data Infrastructure (RDI).
- Designed Python functions to support complex GIS workflows by implementing geospatial queries on databases to create derived products - LiDAR to Normalized DSM, raster clipping for reV exclusions.
- Performed data engineering with geospatial big data (raster, vector). Conducted literature reviews to develop Proof-of-Concept GIS workflows.

**Graduate Project Assistant (GIS) - Wisconsin Sea Grant** Feb 2023 - Apr 2023

- Developed meticulous documentation for migrating Great Lakes ArcGIS Story Map Series to ArcGIS Experience Builder. Designed interactive wireframes and provided user experience (UX) improvement solutions.

**Teaching Assistant (GIS), University of Wisconsin-Madison** Sep 2022 - Dec 2022

- Responsible for teaching the lab component for Geog 377: Introduction to Geographic Information Systems (GIS) using ArcGIS Pro 3.0 for Fall 2022 under Professor A-Xing Zhu for a cohort of 81 students in the Department of Geography, University of Wisconsin - Madison.

**Intern GIS Analyst, UW-Madison Brown County Extension** May 2022 - Sept 2022

- Created ArcGIS Online (AGOL) web app, map viewer for community gardens, and performed extensive spatial analysis. [Access Report](#) [🔗](#).
- Gathered and organized food sources data in Brown, Door, Kewaunee, and Manitowoc counties. Created a successful public-facing interactive map product maneuvering over 12,000 views using **GoogleMyMaps** [🔗](#)
- Designed a Google Sheets-based solution allowing non-GIS users to make effortless updates to web maps. Conducted food desert and network analyses using socio-demographic & road network data, following USDA standards. Published a knowledge sharing product using **ArcGIS StoryMap** [🔗](#)

**GIS Database Assistant, Wisconsin Geological and Natural History Survey (WGNHS)** Apr 2022 - Sept 2022

- Performed spatial database editing using ArcSDE and attribute table updation for southwestern Wisconsin counties using legacy raster data.
- Synchronized geologic information related to Lead and Zinc mines as part of the **USGS** data preservation project and contributed to Wisconsin's Mineral Development Atlas (MDA).

**Geodata Analyst, Larsen and Toubro Infotech (LTI), Mumbai, India** Jan 2019 - Jan 2021

- Worked on metadata extraction and advanced processing of geodata: *Seismic, Well log, Maps, Reports* using *NeuraMap, Neuralog* for Exxon Mobil (US). Performed geo-tagging and data digitization using QGIS and SQL.
- Improved data processing & quality by implementing a keywords-based error mitigation mechanism. Developed quality assurance and quality control methods by creating Excel-based tools. Provided an enterprise-level solution.

## MAPS

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**Static:** [Detailed Map of Mars](#) | [Indus Valley Civilization](#) | [How healthy is Wisconsin?](#) | [Political Map of Africa](#)

**Interactive:** [Political Polarization in the UK \(D3\)](#) | [Wisconsin Social Indicators Map \(D3\)](#) | [US Crude Oil Production Map \(Leaflet\)](#) | [Postal Slippery Map \(Mapbox\)](#) | [Zero Road deaths Vision \(AGOL\)](#)

## ACHIEVEMENTS & PUBLICATIONS

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- To present a paper titled “Enhancing Cartographic Design Through Artificial Neural Networks: A Geometric Approach for Map Generalization” at 43rd **North American Cartographic Information Society (NACIS)** conference in Pittsburgh, PA in October 2023\*
- Published [Environmental Sustainability of Drilling fluids](#) in IIT-ISM Dhanbad conference indexed by Elsevier (2022).
- Received **Barbara Petchnick award for Graphic Design** in recognition of the map titled “Understanding Mars: The Goldilocks Planet” for the academic year 2022 - 2023.
- Received **gold medal** for academic excellence and **best outgoing student** for overall contribution during 2015-19 at Vignan University.

## CERTIFICATIONS

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- [Cartographic Design from ESRI](#) | [Data Analysis using Python from IBM](#) | [Certified GIS Data Developer from Geosys Enterprises \(ESRI Bronze Partner\)](#) | [Environment, Health & Safety from IIT Madras](#)

## PROFESSIONAL PROJECTS

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### Landuse and Landcover Analysis - Geosys Enterprise Solutions, Hyderabad

- Data preparation, data analysis, data identification from satellite imagery data for municipal solid waste disposal facility construction.

### Digitization of Subsurface Data - Larsen & Toubro Infotech, Mumbai

- Developed several quality control methods for vintage seismic survey maps, well logs extracting metadata, navigation data, creating shapefiles, and polygon boundaries. [Access Report](#)