Chinna Subbaraya Siddharth (Sid) Ramavajjala

Madison, WI | (608)-698-9734 | cramavaj@nrel.gov | ramavajjala@wisc.edu

Links: Portfolio

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

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 Slippy Map (Mapbox) | Zero Road deaths Vision (AGOL)

ACHIEVEMENTS & PUBLICATIONS

- 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

- 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

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