Ramakrishna Raju Gangaraju

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Links: LinkedIn Portfolio Website GitHub

SUMMARY

Skilled GIS professional with expertise in advanced spatial analysis, cartographic design with industry-leading GIS tools & programming languages. Database design and implementation using Postgresql/PostGIS, SQL for spatial query and manipulation. Proven ability to collaborate with cross-functional teams through effective communication and leadership. Passionate about leveraging spatial data to solve complex geospatial problems and create visually compelling GIS solutions.

EDUCATION

University of Wisconsin - Madison | MS in GIS & Cartography *Jan 22 - Dec 23 (CGPA: 3.7/4)*
Courses: *GIS, Cartography, Geospatial Big data analytics, Spatial Databases, Interactive Visualization,*
Vignan's University | B.TECH (Major: Mechanical, Minor: IT) *July 15 - June 19(CGPA: 7.4/10)*
Courses: *Database Systems, Operation Research, Automobile Engineering, Manufacturing Process, Operation Systems, Computer Science and Programming*

TECHNICAL SKILLS

GIS Tools: ArcGIS Pro, ESRI Online, Google Earth Pro, QGIS, OSM, AutoCAD, MapBox, Excel, pgAdmin

- To generate, edit and store spatial data for comprehensive spatial analysis, enabling the identification of patterns crucial for developing effective spatial solutions.

Software Languages: Python, HTML, CSS, Bootstrap, JavaScript.

- Python, to perform data and automate advanced processing of large data sets with Python libraries
- To bring End user interactivity on visualized data with UI/UX design using HTML, CSS, Bootstrap, JavaScript.

Libraries: Pandas, Geopandas, GDAL, OGR, Shapely, ArcPy, OSMNX, Rasterio, leaflet, D3, ArcGIS API, Google API .

Other technologies: Microsoft Office Suite, Google Suite, Adobe Suite, GitHub.

WORK EXPERIENCE

GIS Associate Intern, EarthDefine *July 23 - November 23*

- Pioneered developing a highly accurate tree canopy model using advanced GDAL/OGR Python libraries, resulting in a precise representation of tree cover through meticulous analysis of Lidar and NAIP data.
- Recorded and documented each step of the project, including encountered challenges and their innovative solutions, actively contributing to the continuous improvement of work techniques and fostering a culture of excellence.
- Demonstrated expertise in results handling, employing an effective QC-QA diligent approach to enhance team efficiency and consistently meet challenging project deadlines.
- Expert handling of cutting-edge technologies, I effectively transformed raw data into actionable insights, enabling data-driven decision-making and fostering a deeper understanding of project mission
- Improved geoprocessing techniques by employing advanced visualization methods with ArcGIS Pro and QGIS, resulting in the production of higher-quality geospatial data that aligns precisely with project requirements.

GIS Graduate Fellowship, CartLab, UW-Madison *May 23 - August 23*

- Conducted comprehensive Lidar data collection along the Lake Michigan coastal line, acquiring accurate and high-resolution elevation information crucial for coastal erosion change analysis.
- Skillfully applied ArcGIS techniques to extract ground points to identify erosion areas, and quantify the magnitude of changes over a specific period, providing valuable insights for informed decision-making
- Produced immersive 3D visualizations using a combination of ArcGIS and Blender techniques, offering a holistic view of the coastal line and facilitating effective communication with stakeholders (Wisconsin SeaGrant)
- Collaborated closely with coastal management authorities to incorporate their feedback into the visualization outputs, ensuring the visualization accurately reflected their requirements and supported their decision-making processes.

GIS Project Assistant, Kaufman Lab, UW-Madison *August 22 - May 23*

- Conducted analysis of Wisconsin farmers market data and leverage geospatial analysis to support the growth and sustainability of markets by analyzing market data and its geographic locations
- Utilize Python and ArcGIS tools to clean, organize, and analyze over 10 GB of data for spatial processing, ensuring accuracy and reliability in all analyses

- Develop and deliver 15 detailed maps showcasing key demographic trends, public-market connectivity, and market statistics, providing valuable insights into the farmers market landscape
- Prioritize and manage up to 10 tasks per week related to the analysis of data and its geographic locations, resulting in 100% completion of projects on time and to a high standard
- Document all processes and procedures involved in the analysis and mapping of farmers market data, resulting in a 50% reduction in time spent on replicating lab's work and improving overall efficiency.

Operations Analyst (GIS), Sarala Project Works Pvt Ltd - [Full-time] *INDIA July 19 - Oct 21*

- Managed and organized a comprehensive GIS database of construction projects, comprising vital site data and project plans, to ensure accurate, complete, and easily accessible information.
- Performed spatial analysis such as network analysis, buffer analysis, spatial interpolation analysis, and overlay analysis to support construction planning
- Planned machinery maintenance based on working geographic location conditions for better performance to reduce day-to-day task breakdowns, resulting in a 30% reduction in day-to-day task breakdowns and a 25% improvement in task efficiency
- Generated monthly, quarterly, and YTD reports with Microsoft tools in a tabular and graphical format for decision-making that lead to 25% improvement in project efficiency and a 20% reduction in project costs
- Collaborated with other departments, such as engineering and operations by sustaining 100% accuracy and accessibility of information for project team members for the effective use of GIS data and understanding of Maps precisely.

GIS PROJECTS

For more detailed review of my all projects, Please visit my Portfolio page

U.S. Army base and it's GDP *March 22 - May 22*

- Developed a static map using Geospatial analysis of several components of U.S. Army statistics, including army population, GDP consumption Tax effect describing on each state.
- Designed Chernoff face, adhering to cartographic design principles, to humanize the representation of information and utilized design methods to represent four spatial variables at once.
- Analyzed color schemas, shaped Chernoff face attributes, mined data from several online forums, and orchestrated the overburden borne by various states to support the expenses of the U.S. army.

Gangotri Glacier Change *October 22 - December 22*

- Developed and implemented a comprehensive plan for a climate change impact assessment project, utilizing Earth Science and remote sensing techniques
- Utilized geospatial analysis tools such as ArcGIS Pro to analyze satellite imagery and digital elevation data: Leveraged data from the USGS Landsat program to assess glacier changes over a 30-year period
- Applied advanced geospatial analysis techniques to identify and interpret the impacts of rapid climate change, including factors such as black carbon deposits and greenhouse gas emissions.
- Created an engaging and informative story map to disseminate project findings: Built a story map with HTML,CSS, Javascript to effectively communicate the project's outcomes and implications to a broader audience.

Beloit Farmers Road Network to Market *January 23 - February 23*

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