SATYA VENKATA SIDDHARTHA BOKKA

bsatyavs@gmail.com| +1- (716) 330 0011| [GitHub](#) |[Linkedin](#)|[Portfolio](#)

WORK EXPERIENCE

Student Assistant – GIS QA & Instructional Support

University at Buffalo, Department of Geography   **Feb 2024 – May 2025**

- Validated layout design workflows across multiple ArcGIS Pro versions; tested cartographic exports for consistency and quality.
- Supported basic scripting and spatial documentation workflows.
- Assisted in layout scripting and batch production of map series across 400+ student projects.

GIS Intern – Emergency Planning & Stormwater Mapping

Municipal Corporation Kakinada, India   **Jul 2024 – Aug 2024**

- Supported water infrastructure layout design by mapping 22 reservoirs and 3 river intakes, optimizing spatial output for emergency response print production.
- Performed layout-focused QA/QC using ArcMap and ArcGIS Pro, validating export accuracy and ensuring that feature classes were well represented across different formats.
- Recorded field observations and coordinated access to mapping areas.

TECHNICAL SKILLS

GIS Technologies: ArcMap, ArcGIS Pro, QGIS, AutoCAD, ArcGIS Online, Survey123, Field Maps, FME ETL Workflows

Data Management & Databases: MySQL, spatial data integration, operational GIS database management

Remote Sensing: ENVI, ERDAS Imagine Photogrammetry

Programming & ML: Python (Scikit-learn, TensorFlow, Keras, NumPy, Pandas, Matplotlib), R (caret, RF)

Applied GIS Capabilities: spatial intelligence, risk visualization, Threat monitoring, Incident response coordination, situational awareness feeds, internal communications (Symphony equivalent)

EDUCATION

State University of New York at Buffalo   **Buffalo, NY, USA**

*Master of Science in **Geographic Information Science**, (3.64/4) C*   **Aug 2023 - May 2025**

Andhra University   **Visakhapatnam, AP, India**

*Bachelor of Technology in **Geo-Informatics**, (3.14/4) GPA*   **Aug 2019 - May 2023**

PROJECTS

UK Road Traffic Accident Data Integration – FME ETL Workflow

Developed FME ETL workflow to integrate and validate UK RTA data from CSV/KML, perform QA checks, enrich attributes, and export to spatial formats with accident trend analysis.

Palisade Wildfire 2025 – Damage Classification & Cartographic Layout Project

Created ArcGIS Pro layout templates for ML-based damage mapping. Automated PDF/SVG/web exports using Python and Folium. Enhanced layout QA through version testing and issue documentation.

Stormwater Risk Assessment – Kakinada, India

Mapped flood-prone sub-basins and designed city-level pump site plans using ArcGIS Pro. Produced standardized emergency response layouts. Validated export quality for print readiness.

Spatiotemporal Crime Intelligence – Chicago (2010–2023)

Used Random Forest in R on 1.2M records to improve spatial crime forecasting by 31%. Identified 17 hotspots and optimized patrol routes. Published 13-year crime trend analysis for stakeholder access.

Urban Mobility Optimization via AI – Buffalo, NY

Assessed pedestrian safety and accessibility in the Fruit-Belt area using AI-analyzed imagery and sentiment data. Proposed 19 infrastructure improvements to support autonomous transit and enhance walkability.

Watershed Management Planning

Created a watershed plan using hydrological models and land use data. Identified pollution sources, prioritized conservation zones via weighted overlay, and produced thematic maps for sustainable planning.

Vegetation Health Modeling – Arizona

Used co-kriging in ArcGIS Pro to model NDVI across Arizona by integrating elevation and temperature data. Compared predictive accuracy of co-kriging vs. simple kriging (RMSE: 0.117 vs. 0.118).