

# Ashish Mahaur

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GIS Support Specialist at PBC Fire Rescue. Awarded graduate certificate in Geoinformatics for advanced mapping and GIS analysis. Seeking **full-time position, Open for relocation (OPT STEM EAD Approved)**

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## PROFESSIONAL EXPERIENCE

**GIS Support Specialist** - Palm Beach County Fire Rescue, Florida Feb 2025 - Present

- Analyzes and manages large-scale GIS databases, **resolving issues with addressing and routing data** to ensure locational accuracy for operational planning.
- Engineered and developed an **AI/ML (XGBoost) model** to predict dynamic response times, leveraging large-scale GIS and CAD data (~1M records) for intelligent anomaly detection and operational analysis.
- Designed and deployed a comprehensive **hurricane situational awareness application** for proactive public safety, integrating real-time data on storm tracks, flood hazards, and vulnerable populations.
- Streamlines workflows by **automating the creation of locator tools** using ModelBuilder within Intergraph CAD and Geomedia for bimonthly map builds.
- Provide CAD map support in the GIS Analyst's absence, including Map Builds, PLY file creation, and troubleshooting.
- Manages GIS projects, such as utilizing Esri Site Scan for drone data to visualize and monitor construction timelines
- Develops and maintains information products, including specialized maps and spatial analyses of emergency call data, to identify trends and support departmental strategy.

**Graduate Research Assistant** (Part-time) - Remote Sensing and GIS lab, Michigan Tech Sept 2023 - Jan 2025

- Processed and analyzed terabytes of LiDAR data from NSF NEON and NASA GEDI, utilizing Python packages such as Rasterio, GeoPandas, NumPy, and GDAL within a Conda environment.
- Developed and trained **ML/DL model** using Scikit-Learn and PyTorch to enhance **biomass estimation** for the NASA GEDI project.

**GIS Intern** - City of St. Peters, Missouri May 2024 - Aug 2024

- Worked with various municipal departments to develop web apps on ArcGIS Enterprise and AGOL
- Supported the IT Department for the transition from ArcMap to ArcGIS Pro by training GIS users
- Assisted in upgrading the Enterprise server for a performance upgrade and fixing infrastructure bottlenecks

## EDUCATION

**Michigan Technological University**, Houghton, Michigan Aug 2023 - Dec 2024

MS, Integrated Geospatial Technology, GPA 3.9 / 4.0

**University of Delhi (DU)**, Delhi, India Jul 2013 - Jul 2018

BSc + MSc, Geology, Percentage: 70% and 66% (First Division)

## CERTIFICATIONS

**Geoinformatics, Graduate Certificate** – Michigan Technological University Aug 2023 - Apr 2024

## SPECIALIZED SKILLS

**Software:** ArcGIS Pro, ArcGIS Server, ArcGIS Online, ArcGIS Enterprise, MS SQL Server, Survey123, FieldMaps, QuickCapture, Experience Builder, Dashboard, StoryMaps, Intergraph CAD, Geomedia, QGIS, ERDAS Imagine, Trimble Business Center

**Programming:** Python, R, Arcade, MATLAB, GIT, Julia, JAVA, MS SQL, Oracle DBM, HTML, CSS

## LEADERSHIP & AWARDS

**IMAGIN 2024 Graduate Scholarship** - Michigan Apr 2024

- In recognition of outstanding student scholarship in Geographic Information / Geospatial Sciences

**Student Assistant**, Esri Developer Summit 2024 - Palm Springs, CA Mar 2024

- Work with the Esri team to assist in monitoring technical and demo sessions, registrations, and the conference
- Attended technical sessions on GeoAI, Geospatial Deep Learning, ArcGIS Enterprise, and Python for GIS

## RESEARCH PUBLICATION

- Mahaur, A. "Aboveground Biomass Estimation Using Deep Learning: Insights from NEON Ground-Truth Data and Simulated GEDI Waveforms." (<https://doi.org/10.37099/mtu.dc.etr/1861>) Dec 2024