Manita Choudhary

GIS Professional **Status**: Canadian PR **Driving License**: Full G Class

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ABOUT ME

As an experienced Analyst, I am able to responsibly lead, manage and supervise GIS and LiDAR projects. I have gained the expertise to teach, assist, manage and organize different Geography and GIS courses along with a culmination of academic prowess.

I enjoy implementing LEAN (Six Sigma) methodologies for process improvement. A quick learner, team player, quality-oriented with management, leadership, and problem-solving skills.

CERTIFICATION

CARTOGRAPHY
ESRI, 2021

LEAN GREEN BELT (Six Sigma)
QCDMS Consultants, 2020

EXPERTISE

PROGRAMMING SKILLS

C, C++, C#, R Script, Visual Basics, Java, SQL, JavaScript, VB Script, HTML, Python.

APPLICATION/TOOLS

RiPROCESS, POSPac, ArcGIS Pro, ArcGIS Hub, FME, R Studio, MapInfo, ENVY, Visual Studio, Adobe Contribute, Google Earth, Google SketchUp, Matlab, SPSS, GeoProMT, Microsoft Office, AutoCAD, Adobe Photoshop, Adobe Premiere Pro CS5.5.

PROFESSIONAL EXPERIENCE

Lidar and Photography Analyst
Fugro Canada | Toronto | Jan 2020 - Sept 2020

- Supported Fugro's Asset Management team by leading and supervising all LiDAR projects
- Provided geospatial production management support, data processing, data analysis, problem-solving and task management
- Daily production oversight and reporting for all geospatial related projects using LEAN methodologies (KanBan, Kaizen, KPI etc.)
- Ensured data quality is optimal by applying QA/QC principles for both LiDAR and Photogrammetry projects
- In charge of creating Standard Operating Procedure (SOP), training videos and documents as part of knowledge sharing

FUGRO PROJECTS

LiDAR Projects

- Utilized POSPac for Post-processing of trajectory of LiDAR data and then employed RiPROCESS to process, analyze, manage, and visualize mobile laser scanning data (MLS)
- Transformed raw MLS data to widely used, geo-referenced LAS format for further analysis
- Projects: Sugarland (Texas, USA), Virginia (USA), Houston, etc.

Photogrammetry Projects

- Performed Photogrammetry analysis to extract different assets to support government transportation departments and private entities in condition monitoring, identification of deficiencies and enabling prioritization of roadwork
- QA/QC the asset extraction process and output to maintain the high grade of the product
- Projects: Arizona, Abu Dhabi (UAE), Alaska, Colorado, Dallas, Kansas City, Richardson, Toronto, etc.

ACADEMIC EXPERIENCE

Adjunct Instructor - Maps: Earth from Above
State University of New York | Buffalo | Spring 2019

- Taught the course and developed course materials such as lectures, presentations, readings, assembled course books, exercises and learning modules, projects and exams

Senator - Department of Geography
State University of New York | Buffalo | Fall 2018 - Spring 2019

- Reported the proceedings of the meetings to the committee and discussed the next plan of operation
- Voted for additional funding requirements of any department
- Proposed amendments by petition whenever required

Course Assistant - Web based GIS
State University of New York | Buffalo | Fall 2016

- Developed course materials such as lectures, presentations (using R markdown), and readings, exercises, learning modules and assembled course books

Teaching Assistant - Earth Science and Systems II
State University of New York | Buffalo | Spring 2015, 2016, Fall 2015

- Organized and taught the Lab component of the Earth Science and Systems II course

Graduate Assistant - GIAL Lab Attendant
State University of New York | Buffalo | Fall 2012, 2014, Spring 2013

- Invited speakers, managed workshops for students in the Department of Geography, assisted students in the GIS lab, etc.

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KEY SKILLS

LiDAR, GIS, Cartography, Coastal Geomorphology, Geoprocessing, Course Coordinator, Curriculum Development, Research, Problem Solving, Team player, Public Speaking, Project Management, Leadership, Process Improvement.

EDUCATION

Masters of Science in GIS
State University of New York at Buffalo
2017-2019

Masters of Arts in Geography
Major - GIS, Coastal Geomorphology
University of Mumbai
2010-2012

Bachelor of Arts in Geography
University of Mumbai
2006-2009

Bachelor of Computer Applications
Major - Advanced Java
Tilak Maharashtra Vidyapeeth
2006-2009

CHECK OUT LINKS

LinkedIn

GitHub GeoPortfolio

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Story Maps Portfolio

ACADEMIC EXPERIENCE (Continued)

Lecturer - Earth Science and Systems I
State University of New York | Buffalo | Summer 2013, 2014

- Organized and taught the course of Earth Science and Systems

Teaching Assistant - Earth Science and Systems I
State University of New York | Buffalo | Spring 2014

- Assisted the professor to give students additional attention and instruction
- Taught and supervised the class when the professor was on leave

Graduate Assistant - Administration Office
State University of New York | Buffalo | Spring 2013

- Maintained Geography Department website using Adobe Contribute
- Helped professors set up or update their websites

Teaching Assistant - Web-based GIS
State University of New York | Buffalo | Fall 2012

- Organized and taught the lab component of Web-based GIS course

ACADEMIC PROJECTS

Estimating optimal spatial location for Offshore Wind farms using Spatio-Temporal Kriging

- Calculated the distribution of wind over time and space in Long Island (New York) to estimate optimal spatial locations for offshore wind farms
- Spatio-Temporal (ST) Kriging in R script was utilized to find the potential wind energy source locations

Suitability Assessment for the habitat of Blanding's Turtle in the Western part of Erie County

- Applied logistic regression model with sightings of turtle, land cover, elevation, proximity to water bodies & transportation networks
- Coefficients were derived using SPSS and ArcGIS was used for the rest of the suitability analysis

Relative comparison of rill network evolution in two similar soil-mantled experimental landscape

- Hydrologic analysis on Digital Elevation Models (DEMs) derived from experimental landscapes, which were simulated with artificial rainfall and downstream decrement of elevation

Monitoring Spatio-Temporal Coastal changes: Using LiDAR Data

- Performed 3D analysis which was backed by photogrammetric analysis with the methodology based on identifying photographic, cartographic and photogrammetric evidence regarding the coastal topographic change
- This identification involved data acquisition, preprocessing, importation in ArcGIS, reclassification (if needed), data analysis, and finally, Spatio-temporal analysis and visualization

Renderer Menu Tool –

Created an ArcGIS Menu using C#, which allows changing the rendering of LAS datasets with selection buttons:

- Default Fill Symbol - Changes the shapefile to one color
- Class Breaks Renderer - Changes the shapefile color using class breaks
- Unique Value Renderer - Changes the shapefile color using a unique value

Integrated Coastal Zone Management: Ice Jams

- A detailed report of deterministic decision making based on cost-benefit analysis and standard engineering approach of some stakeholders
- Devised a simplified version of the Watershed Planning Process from CATTARAUGUS CREEK WATERSHED RESOURCE GUIDE