



Position: Geospatial Analyst I

Northwest Management, Inc., a full-service natural resource consulting firm based in Moscow, Idaho, is seeking resumes from motivated individuals experienced in the collection, processing and analysis of a diverse array of remotely-sensed geospatial data types, and operational programming language use (Python or R). As a team Northwest Management, Inc. (NMI) provides a broad spectrum of services from field forestry and natural resources consulting through synthesis of scientific research and innovations in geospatial modeling/applications. The Geospatial Analyst I position is responsible for designing, building, and testing automated geospatial data analysis pipelines, statistical evaluations of such pipelines, and method/product launch and documentation. Developing, troubleshooting, and validating custom-built, innovative tools to interpret and analyze a wide variety of remotely sensed data (LiDAR, aerial and satellite imagery, etc.) in support of forest biometrics, inventory, health, classification and temporal change are at the core of this position. This position frequently completes data analysis, datamining, statistical testing, and innovative programming within or connected to large SQL and PostgreSQL database environments. Demonstrated work in ArcGIS, ESRI Enterprise, Image server and Portal, Cloud Compare and QGIS platforms as well as the delivery/hosting of large datasets in online and cloud-based environments is expected. Communication and innovation are essential. This position will additionally provide training to other NMI staff regarding workflow processes, geospatial analytical tools, applied statistics, and data interpretation.

Status: Full Time, Salary, Professional Exempt

Salary: DOE

Time Frame: Starting As Soon As Available

Location: This position will report to our corporate office in Moscow, Idaho. Regular work will occur within the Moscow office. There will be occasional remote-work assignments, dictated by project needs.

Direction: This position will work under the direct supervision of the Director of Technology.

Primary Duties Include:

- Research and develop additive and innovative services for answering client requests within the discipline of remote sensing, including but not limited to; Lidar, Imagery Recognition, GIS, computer hardware, and software. Coding, testing, and the application of statistical models for geospatial and data-mining efforts intended to support natural resource management and stewardship.
- Complete research and development of methodologies and technologies that optimize accuracy and efficient delivery of geospatial products within ESRI, Python, and SQL/PostgreSQL environments.
- Be able to develop and maintain analytical tools and SQL/PostgreSQL database queries/functions in order to support NMI remote sensing services and improve the ForestView® suite.
- Analyze and resolve technical, mathematical, and statistical problems.
- Write functional and detailed design documentation, program specifications, test plans, and other system documentation.
- Independently recognize and resolve methodological and/or conceptual errors within workflows.
- Participate as a team member on the technical services team to continually improve quality and efficiency of products as well as train other staff to increase general knowledge and use of remote sensing, data analytics, spatial analytics and database products.

- Continue to expand the technical services network through targeted participation in promotional activities, client proposals, and research & development related to the skill-expectations of this position.
- Ability to spend up to two (2) weeks in the field at a time with minimal supervision collecting geospatial field data anywhere in continental USA.
- Represent NMI and its' services related to this position in public forums through presentations, workshops, and leadership of work-related efforts.

Minimum Qualifications:

- A MS degree in Remote Sensing, Computer Science, Statistics, Engineering or related field with applied research in the natural environment, and 2-years' experience in remote sensing data analysis related to natural resources.
- Highly skilled with ArcGIS/QGIS, Microsoft Office, and applied skills in one or more programming languages (Python, R etc.)
- Ability to manipulate, map, and model aspects of large data set and 3D data cloud (Multi-TB)
- Ability to create and statistically interpret complex data and data models.
- Demonstrated experience in remote sensing data, data structures, geodatabases, and statistical modeling.
- Demonstrated ability in spatial and statistical modeling, biometrics, and/or calculus.
- Experience in fieldwork to support remote sensing products.

Additional Desirable Qualifications:

- Doctoral degree in Remote Sensing, Statistics, Engineering, Natural Resources.
- Demonstrated expertise in neural networks, computer vision, data mining, machine learning, and/or computer science. Experience with machine learning methods and tools including scikitlearn and keras.
- Expertise with aerial lidar data acquisition, processing, and/or product accuracy/validation testing.
- Experience in forest inventory management, forest growth projection, and/or biometric/allometric modeling.
- Publication experience relating to scientific literature associated with natural resources
- Ability to organize and perform publication-quality literature review by objectively analyzing research publications and using citation tools such as Mendeley, Zotero, OneNote, etc.

The majority of work for this position operates in a professional office environment. This position must regularly lift 15 pounds and occasionally lift and move up to 40 pounds. This position is occasionally required to stand; walk; climb or balance and stoop, kneel, crouch, or crawl in the outdoors, on uneven terrain and in inclement weather while operating technical data-collection equipment. The geographic working area is predominantly in the Inland Northwest; however, the operating area for this position includes the continental U.S. and occasional international travel.

If you are interested in this position please submit an application to Tierra Moser, NMI Human Resources at moser@nmi2.com.

Closing Date: As soon as filled, 2022

If you have direct questions about the position please contact: Mark Corrao (Director of Technology) 208-310-6732, mcorrao@nmi2.com