Yoseph Gebrelibanos . Geospatial Data Scientist

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Technical Skill Set/Knowledge

- Pandas
- NumPy
- Python
- SQL
- HTML and CSS
- Jupyter notebook
- Spatial Analysis
- Machine Learning
- 3D Analyst
- LiDAR
- Data Analysis
- Spatial Databases
- Matplotlib
- Seaborn
- Folium
- Scikit-learn
- ScipPy
- Watson Studio

Education

- Professional Certificate in Data Science, IBM
- M.S Environmental Sciences,
- Graduate Certificate in GIS, Marshall University, Huntington, WV
- B.S in Forestry, Debub/Wondo Genet College of Forestry, Ethiopia

Trainings/Certifications

- Python for Data Science & AI
- Designing Maps with ArcGIS
- Databases and SQL for Data Science
- Data Analysis & Visualization with Python
- Machine Learning with Python
- Learning ArcGIS Spatial Analysis
- ArcPAD 10.0: Mobile GIS for reclamation Mapping and Analysis
- Intro to Geo-Processing Scripts using Python
- Mapping with Google
- Geo-processing & Modeling tools

SUMMARY

Over 5 years of experience in the field of Data Science and Data Analytics. Highly technical hands-on solutions python Programmer with a strong ability to engage IT teams, learn new systems, analyze and visualize data, manage large-scale technical issues, and optimize site architecture. Experienced with sophisticated Geospatial software and systems, specialized mapping, predictive analysis, machine learning, feature engineering, data preprocessing, Spatial data integrity and analysis.

HIGHLIGHTS

- Visualized information using a range of tools, developed scripts and algorithms, created explanatory and predictive models, and conducted comparative analysis to address complex problems.
- Developed and applied methods to identify, collect, process and analyze large volumes of data to build and enhance products, processes, and systems.
- Performed image classification and feature extraction using deep learning.
- Experienced producing LiDAR deliverables utilizing ESRI ArcGIS, ArcCatalog, ArcScene, Virtual Geomatics, LAStools, GeoCue, Microstation, Global Mapper & including 3D Analyst, Spatial Analysis, ArcHydro etc.
- Used Python for machine learning, predictive analysis, data cleaning, data preprocessing, feature engineering, exploration, validation and deployment.
- Performed GIS Analysis, application development, user support & other GIS related activities
- Developed and managed data processes to ensure data availability and usability.

PROFESSIONAL EXPERIENCE

Senior Geospatial Data Scientist/Task Lead   **Mar 2018 – Present**
Dewberry, Fairfax, VA

- Performed image classification and feature extraction using deep learning.
- Mentored and assisted developers in creating Java-based web and GIS applications
- Partnered with team of GIS Analysts, Database Developers & Web Developers
- Created scripts, models & macros in multiple sensor platforms
- Developed and managed data processes to ensure that data is available and usable.
- Ensured that consistent availability and sufficient quality of data to be considered fit for use.
- Created data platforms, integration architectures, and pipelines.
- Communicated research results within the quantitative teams and to engineering and product teams
- Responsible for data extraction, compilation & interpretation of multiple sensor input data (stereo and monoscopic)
- Validated data quality, radiometric calibration and statistical models' application

- Collaborated with other team members on research endeavors and writing code
- Developed innovative GIS and imagery applications and services
- Processed imagery and metadata to produce Georeferenced and Calibrated Layers
- Responsible for Elevation, Featuring & other specific data processing and manipulation
- Analyzed image data acquired from aircraft, satellites, or ground based platforms, using Statistical, Image Analysis and Geographic Information Systems (GIS) applications
- Created a variety of digital mapping and remotely sensed products using various software platforms
- Created and disseminated production workflow documents
- Configured ESRI's (Environmental Systems Research Institute) ArcGIS Server and ArcSDE (Spatial Database Engine)

Python / GIS Programmer   **Jun 2015 – Feb 2018**
West Virginia Department of Environmental Protection, Charleston, WV

- Developed and applied methods to identify, collect, process and analyze large volumes of data to build and enhance products, processes, and systems.
- Visualized information using a range of tools, developed scripts and algorithms, created explanatory and predictive models, and conducted comparative analysis to address complex problems.
- Conducted data mining and retrieval, and applied statistical and mathematical analyses to identify trends, solve analytical problems, optimize performance.
- Applied tools and algorithms to identify trends and pattern in data.
- Used Python for machine learning, predictive analysis, data cleaning, data preprocessing, feature engineering, exploration, validation and deployment.
- Designed and maintained data resources and operation of GIS software within the context of programs and policy directives
- Performed LiDAR point classification and delivered LiDAR data derived products such as digital terrain models, slope, Hillshade, aspect, 3D models, Rasters and contours
- Prepared GIS application user manual, trained user staff in the operation of GIS applications and provided user support for GIS application programs
- Partnered with team of GIS Analysts, Database Developers & Web Developers
- Performed GIS Analysis, application development, user support & other GIS related activities
- Utilized drone acquired multispectral imagery to create highly precise orthomosaic and point clouds using Pix4D software
- Performed GIS hardware and software operations, performed activities associated with implementation operation & enhancement of the GIS software
- Analyzed user organization functional requirements and developed GIS application programs
- Processed point clouds and aerial photogrammetry collected with unmanned aerial vehicles (UAV/ drones)
- Produced cartographically sound maps for conferences and public forums

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Data Analyst / GIS Remote Sensing Analyst   **Oct 2011 – May 2015**
West Virginia Department of Environmental Protection, Charleston, WV

- Designed, developed, implemented and maintained databases to manage data analysis efforts
- Developed and presented data and insights to management
- Utilized technology and analytics to evaluate and improve risk management and governance processes
- Used data and analytical insights to identify trends, emerging technologies and growth opportunities
- Researched, Developed, implemented new methods of measuring and analyzing data sets and processes
- SQL query for data extraction and management
- Designed data models to answer business questions
- Designed and implemented data models, performed statistical analysis and created predictive analysis models
- Gathered and analyzed information, designed and code data process and build predictive analytical models, formulate and test hypotheses, contributed to the development and communication of recommendations
- Designed, implemented and maintained geospatial data assets of WVDEP using remote sensing and GIS technologies for the purpose of environmental monitoring, analysis and decision support
- Displayed and Analyzed Digital Elevation Models (DEM), Hillshade, satellite imagery, and other Raster data in 3D using ESRI ArcScene, Global Mapper & Virtual Geomatics software
- Performed quality control and LiDAR data deliverables production work
- Coordinated with the Spatial Application's Development Group to research, design, develop and maintain system/software applications to support public access to environmental data via the Internet
- Performed spatial and remote sensing analysis work and conducted research in support of the Agency's mission
- Interpreted Light Detection and Ranging (LiDAR) data from las file format using satellite imagery and remote sensing products for reference
- Processed high resolution satellite imagery provided by OSM from NGA into useful products for WVDEP
- Created mosaics and assisted with image server tiling of NGA data for the Agency's mining programs
- Downloaded aerial photos from the USGS website and geo-reference the products to be used by the mining division in the agency
- Created study course materials for the United States Department of the Interior, Office of Surface Mining Reclamation and Enforcement
- Developed and created a manual on how to access remote sensing data