C.E. Dallas Hoffman
Geospatial Analyst, GISP^('25), MGIST

Cary, NC • (704) 787-5204 • hoffmangeospatial.github.io • hoffmangeospatial@gmx.com • 35°45'45.8"N 78°47'53.9"W

SKILLS

GIS Platforms: (ESRI Suite) ArcGIS Online, ArcGIS Pro, ArcServer, GRASS GIS, QGIS, AgiSoft Metashape
Programming & Scripting: Python, R, HTML, CSS, SQL, GitHub, Jupyter Lab/Notebook, Visual Studio, Live Code
Data Management: MS Access, PostgreSQL, pgAdmin, MS Server, ArcGIS Server Manager, ArcSDE

EXPERIENCE — EIGHT YEARS IN GIS

North Carolina State University
Department of Civil, Construction, and Environmental Engineering
Coastal Hazards Research Lab   *Nov 2023 - Sep 2024*
Geospatial Data Scientist, Research Lab Manager

- Generated dozens of geostatistical intel datasets, graphs, charts, and map layouts to support critical coastal hazard, erosion mitigation, and shoreline engineering operations for the NC Department of Transportation's Coastal Monitoring Program (CMP).
- Collected and analyzed aerial photogrammetry datasets (.sid files) of the Oregon Inlet Terminal Groin provided by the NCDOT resulting in quarterly+ updated shoreline and dune volume temporal change data that was integral to the CMP and annual reports.
- Engaged in strategic, focused, near-monthly meetings with the CMP project consulting engineer to QA/QC data analysis outputs, photogrammetry interpretations, and feature creation to ensure data accuracy and precision.
- Innovated automation tools such as consolidated geoprocessing tasks in Arc Model Builder and Arc(Py) Notebook that led to streamlined data analysis workflows, improved efficiency, and reduced the potential for introduction of human error.
- Updated all outdated ArcMap procedures to ArcPro compatibility throughout the CMP project ops manual because I had intel that NC State ArcMap licenses would terminate in June; I achieved this goal in rapid time which resulted in eliminating the department's need to purchase costly individual licenses for CMP.
- Managed and maintained the Coastal Engineering Research Lab on Centennial Campus of roughly ten graduate students and visiting scholars.
- Planned and led bi-weekly meetings to present project progress and technical details to the lab's principal professor, Dr. Anarde.

North Carolina State University
Department of Biological and Agricultural Engineering
Precision Ag Data Science Extension   *Oct 2022 - Oct 2023*
Principal Data Science Engineer

Approached by the N.C. State Climate Office to develop an open source, cloud-based data analysis tutorial component for a U.S. Soy/United Soybean Board funded research project.

- Engaged in strategic consultation with Extension Specialists for needs-gathering operations leading to project goals determination.
- Authored and deployed both a statistical and geospatial data analytics interactive, cloud-based, live-coding environment package utilizing a unique poly-glot "script of scripts", multi-language kernels notebook framework and code+content+configuration repository docker image in JupyterLab and Binder.
- Programmed using several not-necessarily immediately interchangeable/interoperable coding languages – R, Python, Bash (magics).
- Forked, adapted, and applied a bioinformatics, polyglot Jupyter coding notebook environments framework package to be able to program using coding languages R, Python, and Bash – interchangeably/interoperably.
- Staged yield monitor data geovisualizations in a public-facing ArcGIS web map application with data analytics dashboard for user-friendly access and presentation.
- Incorporated external data layers through REST services to provide further contextual information to gain valuable insights.

Zonda   *Jun 2019 - Sep 2023*
Research Analyst

- Served as the sole GIS, Geospatial subject matter expert on an 11+ member research team within the Data Intelligence department covering all 50 states.
- Conducted research using state, county, and local GIS open data resources, database systems, satellite imagery, property records, deeds, plats, maps, consolidated real estate, and assessor tax roll data.
- Updated the proprietary national database of dozens of specific real estate market growth performance metrics and data intelligence points for some 20+ major industry development and builder clients in 50+ counties among 10 states.

- Developed to fill a previously undiscovered void in internal research project management, a semi-programmed methodologies and resources system for efficacious temporal project performance, progress, and productivity tracking for project metrics of 50+ counties in ten states.
- Accomplished – with the implementation of the aforementioned – a significant increase of ~50% in output productivity with a simultaneous decrease of similar amount in input operations.

Theorem Geo Associates   *Apr 2016 - Jan 2019*
Geospatial Consultant, GIS Technician

Duke Energy Land Strategy and Real Estate (RE)
Lead Project Developer and Manager

- Consulted with client – Duke Energy GIS Director – to define scope and effort for contract project to address business needs.
- Independently designed and developed from the ground up, deployed, and maintained a sustainable, collaborative online data management system for major, continuous RE project involving complex acquisitions, QA/QC tasks, organization, extracting/transforming/loading (ETL), and processing of quarterly-updated geospatial parcel data for Duke Energy's seven-state, 260+ county service territory.
- Established sustainable and automated workflows, standards, ETL practices, and processes. As a result, a $250,000 four-year contract with renewal option was awarded by Duke Energy to the project, as its value was realized to internal enterprise mapping operations utilized company-wide from RE and capital projects to utility corridor vegetation management and easements mapping.
- Deliverables of GDBs, SDEs, and other spatial data layers as requested by clients utilizing project outputs.

Duke Energy Environmental Health and Safety (EHS)
Geospatial Data Analyst

- Synthesized, performed QA/QC tasks, and organized large amounts of tabular data and GDBs from the NC Department of Natural Resources – Natural Heritage Program, which comprised myriad attribute information collected over 100+ years on every endangered and threatened elemental occurrence of species of plant, animal, and natural community.
- Prepared map layer deliverables to Transmission Vegetation Management Department for Best Management Practices (BMP).

Georgia Power (Southern Company) Emergency Storm Services (ESS)
Geospatial Data Analyst

- Assisted with the preparation and QA/QC processes of different aspects of spatial data and relational databases relevant to four Storm Staging Sites for Georgia Power's ESS.

Duke Energy Transmission Vegetation Management (TVM)
Data Project Designer

- Performed major data synthesis, organization, and joining of historical annual Transmission Line Work Orders to a web map app and relational database I established to drastically help improve TVM record cohesion and gaining valuable performance insights from the information created.

EDUCATION

North Carolina State University   *May 2023*
Master of Geospatial Information Science and Technology (MGIST)
Special Designation Professional Science Masters (PSM)

    Capstone Project for NC State Bio&AgEng (BAE) Data Science Extension & NC State Climate Office
    Yield Monitor Data Analysis for Soybean Producers: a tutorial using FOSS

North Carolina State University   *Dec 2021*
Graduate Certificate in Geographic Information Systems (GIS)
Issued by the Center for Geospatial Analytics, College of Natural Resources

University of North Carolina Charlotte   *Dec 2012*
Bachelor of Arts, International Studies, Concentration in EU Environmental Affairs
Minors in Political Science, History, German

Central Piedmont Community College   *May 2009*
Associate of Arts, General Liberal Studies

CERTIFICATIONS

- Pending GISP Certification • ArcGIS Python Scripting • Slack Basics • Inclusive Excellence Program
- **U.S. Department of Homeland Security FEMA Emergency Management Institute (EMI)**
  - Applications of GIS for Emergency Management
  - Geospatial Information Systems Specialist (GISP)
  - Geospatial Information Infrastructure (GII)