

Morgan McClure

Data Science & Analytics

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Performance-driven data scientist with a strong foundation in numerical analysis, statistical modeling, and geospatial data processing. Experienced in working with large, diverse datasets under time and accuracy constraints. Proven ability to build interactive tools and reproducible workflows to support decision-making. Passionate about high-performance environments and excited to apply analytical skills to motorsport strategy.

SKILLS

- **Programming:** R, Python, MATLAB, JavaScript, SQL
- **Tools:** ArcGIS, R Shiny, Observable Framework, Netlify, Git/Github
- **Data Science:** Statistical modeling, spatial analysis, sampling design, interactive dashboards

EXPERIENCE

Associate Data Scientist – The Soil Inventory Project
2023 – Present

- **Interactive Soil Data Monitoring Dashboard (Observable Framework, R, Javascript)**
 - o Developed an automated reporting dashboard that provides users with real-time analysis, dynamic data visualizations, and interactive maps responsive to user-submitted soil data. Designed to support land management decision-making.
- **Automated Sampling Design Application (R Shiny)**
 - o Created optimized, interactive sampling design software using geospatial statistical methods, tailored to user-defined spatial inputs and constraints.
- **Cross-Platform App Suite Collaboration**
 - o Work closely with the development team on a suite of mobile and web applications that enable users to create soil sampling campaigns, upload previously collected data, and generate insights through integrated visualizations and analysis tools.

Post Baccalaureate Data Fellow – Skidmore College
2022 - 2023

- **Data Analysis Lab Materials and Coursework Development (R, ArcGIS, QGIS, Python)**
 - o Collaborated with faculty across disciplines to develop lab activities and instructional materials integrating statistical methods, data visualization, and reproducible workflows with collected data and real-world datasets.

- **Undergraduate Research Mentorship (R, ArcGIS, Python)**
 - o Guided students through independent data analysis projects, from question formulation and data wrangling to visualization and final presentations.

PUBLICATIONS

Rapid soil harvesting using a novel soil auger system for farm-scale soil carbon estimates

Soil Science Society of America Journal, 2024

Evaluated a novel drill-auger system against traditional push-probe methods for soil carbon sampling. Demonstrated comparable accuracy with significantly faster collection times, supporting more efficient monitoring of carbon sequestration in agricultural systems.

ADDITIONAL PROJECTS

Soil Carbon in Vineyards

Jackson Family Wines & The Soil Inventory Project

Analyzed soil carbon distribution across vineyard ecosystems at multiple spatial scales. Focused on quantifying carbon differences between tractor rows and vine rows, offering insights into how vineyard management practices influence soil carbon sequestration.

Grazing Lands Assessment in the Contiguous US

Skidmore College & The Nature Conservancy

Conducted large-scale statistical analysis and mapping of U.S. grazing lands, classifying ownership by private, state, and federal jurisdictions at the county level. Integrated TNC resilience data to evaluate implications for sustainable land management.

F1 2025 Dashboard (Independent Project)

<https://f1viz.observablehq.cloud/morgan-mc/>

Built an interactive data dashboard using Observable Framework to visualize Formula 1 race data. Integrated telemetry data to support analysis of driver performance, pit strategy, and race conditions. Designed for rapid interpretation of multi-variable time series data with a clean, user-friendly interface.

EDUCATION

Skidmore College 2018-2022

BA Environmental Science, Statistics Minor