
Data Lab Newsletter - January 2025

From tuftsgis-request@elist.tufts.edu <tuftsgis-request@elist.tufts.edu>
on behalf of
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Date Mon 1/6/2025 10:02 AM
To tuftsgis@elist.tufts.edu <tuftsgis@elist.tufts.edu>

DRONES *geospatial* CARTOGRAPHY
SPATIAL STATISTICS GEOGRAPHIC INFORMATION SYSTEMS STATISTICS
DATA SCIENCE **DATA LAB** remote sensing
Visualize **DATA LAB** Virtual
METADATA *HIGH PERFORMANCE COMPUTING* NLP Reality
Storymaps Machine Learning *bioinformatics* technology
Web-Mapping TEXT MINING *GPS Digital Humanities*
<http://DataLab.tufts.edu> | [@TuftsDataLab](#) | DataLab-support@elist.tufts.edu

GIS & Data Analysis Job Postings

Tufts Data Lab | Research Technology | Tufts Technology Services

January 2025

Happy New Year! And welcome back to campus!

Here are some great opportunities as we move into 2025!

Happy Mapping,
The Data Lab Team

Internships & Fellowships







Community Conservation, Data Visualization, & Mapping Externship

National Geographic & The Nature Conservancy

Ready to embark on an adventure that not only addresses critical environmental issues but also equips you with the tools to solve them? In collaboration with the National Geographic Society and The Nature Conservancy, this 8-week, fully remote externship offers a unique opportunity to tackle pressing conservation matters and drive positive change in your community.

What You'll Do:

-  Learn how to collect and analyze data to solve conservation issues using Esri's ArcGIS Online, Survey123, and QuickCapture.
-  Research and address local environmental challenges through geospatial analysis.
-  Engage with community leaders to gather local insights and see how conservation affects them.
-  Develop practical solutions to bridge gaps in local conservation efforts.

Program Details:

- Start Date: February 10, 2025
- Duration: 8 weeks
- Commitment: 10 hours per week
- Format: Fully remote
- Who Should Apply: Anyone aged 18-25 who is passionate about conservation and eager to make a difference.

Applications are now open and will be reviewed on a rolling basis. The final deadline to apply is February 1, 2025.

Don't miss your chance to gain hands-on experience and make an impact. Apply today and be part of the solution: <https://lnkd.in/eE4WQQEY>



DEVELOP National Program
Applied Sciences' Capacity Building

NASA DEVELOP Summer Term

DEVELOP cultivates the next generation of leaders and Earth observation users. We work with communities and organizations to address environmental and policy concerns through the practical application of NASA Earth science information.

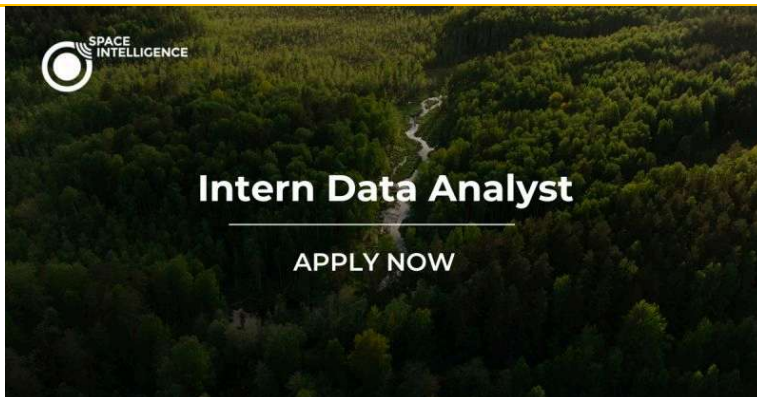
DEVELOP conducts feasibility studies that bridge the gap between Earth science information and society. These projects help both participants and partners learn more about using geospatial information. Projects address priorities and concerns in nine thematic areas:

1. Agriculture
2. Climate
3. Disasters
4. Ecological Conservation
5. Energy
6. Health & Air Quality
7. Urban Development
8. Water Resources
9. Wildland Fires

Three times a year, participants apply through a competitive application process. Those selected conduct 10-week research projects in interdisciplinary teams of 4-5 people. They work closely with DEVELOP science advisors and mentors to apply Earth observations to address real-world problems. Through this process, participants build both research and science communication skills. These skills and project experience help set them up for success in the workforce.

Applications for the summer term open January 13th! Proposed projects will be posted then and include in-person and virtual experiences. Learn more:

<https://appliedsciences.nasa.gov/what-we-do/capacity-building/develop/apply>.



[Geospatial Analyst Intern](#) | Space Intelligence

Role Overview

The key focus of this role is to provide the testing and training data used to produce and assess the quality of/improve our maps, through the manual analysis of high resolution satellite data, other geospatial layers, and the published and grey literature.

You will be part of a “Map quality & ecology” pod (small expert team), and work a lot of your time within small interdisciplinary science teams in a fast-paced environment. This role reports to Dr Thom Brade.

Role and Responsibilities:

- Work as part of a team (pod) to provide

- Create high quality sampling polygons and points for developing and testing our landcover maps through expert knowledge gained through research, discussion with our ecologists and other experts in our team or in country, and analysis of high resolution satellite data and other geospatial data sources using QGIS.
- Review draft maps of land cover and carbon produced by Space Intelligence for errors or problems

How to apply

Please send your CV and a cover letter explaining why you're particularly suited for this role to careers@space-intelligence.com

Please note, that if you don't currently have the right to work in the UK, we do not sponsor visas so please check out the UK Government website for further information about visas before applying.

Closing date: Monday 6th January 2025, 5pm



GRAIN MILLERS MAKES DECISIONS BASED ON SHARED VALUES AND INVESTS IN WHAT IS GOOD - NOT JUST FOR US, BUT FOR THE FARMERS WE DEPEND ON, THE CUSTOMERS WE SERVE, AND THE WORLD WE ALL LIVE IN.

IT'S MORE THAN PROCESSING. IT'S OUR PROMISE.

Sustainable Agriculture & Data Analysis Fellowship | Grain Millers

Must reside in MN, IA, OR, WI, or IN

Who we are.

Grain Millers, Inc. is a leading manufacturer and merchandiser of whole grain ingredients utilized in food products served around the world. While you may not know us directly, you almost certainly know our products. We have supplied food ingredients to virtually every large food company in the world for over 38 years. We employ nearly 1000 associates throughout North America. Our Eden Prairie, MN headquarters is the hub of our support infrastructure. Our manufacturing facilities are in MN, IA, WI, IN, OR and Canada.

Why we need you.

At Grain Millers, we're advancing sustainable agriculture, and we need your help. As our Sustainable Agriculture & Data Analysis Fellow, you'll support innovative projects, emissions tracking, and environmental goal setting. If you're passionate about sustainability, skilled in data analysis, and ready to drive impactful initiatives, join us to help shape our future.

Who you'll be working with.

You'll collaborate closely with our Sustainability and Crop Science teams. Led by the Sustainability Manager, these teams are dedicated to advancing sustainable practices across our operations and supply chain. You'll also work with cross-functional experts focused on environmental goals, emissions management, and regenerative agriculture initiatives. This supportive, mission-driven team values innovation, data-driven insights, and a passion for building a sustainable future together.

Who you are.

You are a passionate and driven individual with a strong background in environmental science, agronomy, or a related field. You have a keen interest in sustainable agriculture and a solid understanding of soil health, carbon accounting, and climate regulations. You're skilled in data analysis and visualization, using tools like PowerBI, Tableau, and Excel to communicate complex information clearly. With strong research and writing abilities, you excel at working independently and managing multiple projects. Above all, you are motivated to make a meaningful impact in sustainability and regenerative agriculture.

Open until filled: <https://grainmillerseden.applicantpool.com/jobs/1170484>



Research and GIS Intern | Metropolitan Area Planning Council (MAPC)

Remote in Massachusetts

The Metropolitan Area Planning Council (MAPC) seeks a Research and GIS Intern to support members of the Data Services department on data assembly, mapping, analysis, and research for local and regional planning projects. Strong experience in Esri ArcGIS and R and/or Python is a must for this position, as is an interest in planning and commitment to working towards a more equitable and sustainable Greater Boston region. Our team works on a large portfolio of projects with departments across the agency, so candidates should be eager to apply their skills to several projects at once, in diverse topic areas.

Examples of projects past interns have worked on include:

- Reviewing existing census tract and block group boundaries and adjusting them to reflect population growth and locally recognized boundaries for use in Census 2020
 - Researching food waste tonnage, disposal methods, and corresponding emissions to understand the quantity of greenhouse gases emitted from food waste in Massachusetts and strategies for their reduction
 - Conducting an inventory of Massachusetts zoning by-laws and recording information for use in land use modelling
 - Mapping in support of local Hazard Mitigation Planning projects
 - Creating map layouts and templates to streamline mapping at MAPC

This spring, our Research and GIS Intern will likely work on some of the following projects, as time and capacity allows: collection and quality assurance of development data for the MassBuilds database; Digital Equity Program research; developing materials for and helping to plan MAPC's migration from ArcMap to ArcPro; updating and publishing data for the Arts Indicators database; as well as data requests and emerging projects.

The position is open until filled, and applications are reviewed on a rolling basis. A review of applications will begin immediately. Please attach a cover letter, résumé, and portfolio that includes a writing sample and GIS project example. See more:

<https://www.governmentjobs.com/careers/mapc/jobs/4762266/research-and-gis-intern?pagetype=jobOpportunitiesJobs>



Geographic Information Systems (GIS) Intern | Central Arizona Project

POSITION RESPONSIBILITIES:

- Complete an update to the CAP custom road project including but not limited to:
 - Data updates
 - Dashboard for informing data contribution progress
 - Implementation of network within Experience Builder applications
- Meeting with CAP departments to gather feedback
- Work with various CAP departments to create maps for meetings and presentations.
- Perform edits to a variety of Water Resource layers.
- Organize and publish layers to CAP's enterprise spatial database with appropriate metadata.
- Assist with organizing and publishing map services to AGOL\Portal.
- Help employees with CAP's web and mobile GIS applications.
- Provide spatial analysis for a variety of requests.
- May be involved in some remote sensing and Lidar projects.

At end of the 11-week engagement, the intern will prepare and deliver a presentation which includes:

- A summary of the work including map and data samples
- What he/she learned
- An evaluation of the intern experience at CAP
- Recommendations for future interns

CANDIDATE REQUIREMENTS:

- Junior or higher-level student (or recent grad) working toward a degree in GIS or related field. May be an undergrad or grad student.
- Applicant must possess some ArcGIS software experience. At a minimum, ability to create general maps, edit data layers, and perform simple data queries and overlays is required.
- Clear oral communication skills.
- Excellent problem-solving ability.
- Must submit transcripts (unofficial or official) with the online application.
- Applicant must have their own transportation to CAP headquarters in North Phoenix.
- Must be legally authorized to work a paid internship in the United States.

Learn More Here: [GIS summer internship](#)

Non-Tufts Related Job Postings

GIS Analyst and Data Lead | City of South Burlington, VT

South Burlington is a growing, dynamic community integrating a data strategy into its operational and policy decision-making. The GIS Analyst & Data Lead supports the Data Manager in implementing the City's data strategy by collecting, managing, analyzing, and visualizing geospatial data to answer operational and policy questions.

Salary: \$69,284.80 - \$73,528.00 Annually

Examples of Duties

1. Acquires data from multiple sources. Cleans, analyzes, and manages geospatial data stored in various formats.
2. Builds and maintains data products. This includes updating existing datasets as well as modeling and creating new geodatabases and data layers.
3. Conducts field investigations as necessary to verify the accuracy of the City's GIS data, with the support of the Data Manager.
4. Presents data analyses using maps, visualizations, and dashboards that are accessible to audiences with different levels of expertise and abilities. Users may include supervisors, Department Heads, the City Manager, City staff, and the public.
5. Uses knowledge of departmental data and goals to proactively identify and propose analyses that support leadership in answering questions and making decisions.
6. Supports the development and/or implementation of standards for data collection, storage, documentation, maintenance, and sharing to improve data quality and enable reuse.
7. Serves as an administrator for the City's GIS software with support from the Data Manager. Provides assistance, coordination, and training to City staff using GIS software tools, and oversees GIS contractor relationships.
8. Works with the Information Technology (IT) team to improve processes and modernize systems.
9. Performs other duties as assigned.

Minimum Required Qualifications

1. Bachelor's Degree in a related field of study OR equivalent professional experience demonstrating required skills, including, for example, a GIS certificate.
2. Three years of experience with creating, managing, analyzing, and visualizing data in a geographic information system, preferably ESRI Enterprise GIS and ArcGIS Desktop.
3. Experience with analytical, data management, workflow automation, and visualization tools (this could include, for example, tools like Python, R, Microsoft Access, PowerBi, or other tools).
4. Possesses a valid Vermont Driver License.

See full job description [here](#).



Geospatial Analyst II | Dewberry

California, Florida, Virginia

Dewberry is currently seeking a Geospatial Analyst II located near our Long Beach, CA office or Rancho Cordova, CA office. Remote positions will be considered dependent on experience, but the applicant must reside in California. This is an excellent career opportunity for an individual to join a team of professionals while working in a multidisciplinary consulting and engineering firm. The firm succeeds through the individual and collaborative skills of its people. We offer opportunities for professional growth while working with and applying the latest geospatial technology. Overall responsibility includes working on dynamic projects with state, local, and federal clients under Dewberry's Geospatial Solutions and Analytics (GS&A) team. ***On the career site, there are also internships and other job opportunities in Florida and Virginia, so give it a look!***

See more and apply here: <https://careers-dewberry.icims.com/jobs/13841/geospatial-analyst-ii/job>



GIS Data Analyst | Geosyntec Consultants

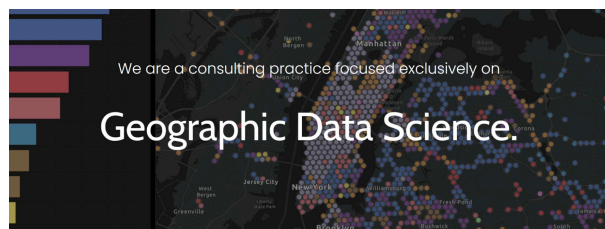
Bedford, NH

Do you want to build an impactful career to change the world for the better?

Geosyntec has an exciting opportunity for a GIS Data Analyst in our Bedford, NH office, you will apply your academic knowledge and experience with standard practices and techniques used when working with data and GIS projects to support and manage projects that include geologic, geotechnical, and geohazard assessments and more.

Geosyntec is an innovative, international engineering and consulting firm serving private and public-sector clients to address new ventures and complex problems involving our environment, natural resources, and civil infrastructure. Our engineers, scientists, technical and project employees serve our clients from offices across the world. Ranked by ENR as one of the top environmental engineering design firms, Geosyntec is internationally known for its technical leadership, broad experience, and exceptional client service.

See More: <https://careers-geosyntec.icims.com/jobs/2997/gis-data-analyst/job>



Data Engineer | Atomic Maps | Remote

About Us: We are a small, dynamic geospatial software and data consulting startup. Our team is dedicated to creating a geospatial data platform to unify data silos under a single search, discovery, and inspection engine.

The Role: We're seeking a talented and motivated Data Engineer to join our growing team. This role is primarily technical but requires strong communication skills for both internal collaboration and client interactions.

Responsibilities:

- Develop and maintain data pipelines using Python and open-source geospatial tools
- Process and analyze large-scale geospatial datasets
- Implement and optimize data storage solutions
- Collaborate with team members on project planning and execution\
- Listen to the client's needs and develop POC solutions.
- Communicate technical concepts to both technical and non-technical stakeholders
- Engage in independent research to solve complex problems and stay current with industry trends

Key Skills:

- Proficiency in Python programming
- Knowledge of common data structures
- Knowledge of database structures and SQL
- Strong problem-solving and analytical skills
- Excellent written and verbal communication skills
- Detail-oriented approach to work
- Self-motivated with the ability to work independently

Nice-to-Have Skills:

- Experience with cloud computing platforms (AWS, GCP, or Azure)
- Knowledge of GIS software (e.g., QGIS, ArcGIS)
- Experience with open-source geospatial tools, particularly PDAL and GDAL
- Experience with OpenSearch or ElasticSearch
- Knowledge of containerization workflows (Docker)

We Encourage You to Apply If

- You're passionate about geospatial technology and data
- You're a quick learner and eager to expand your skill set
- You are curious and a continuous learner
- You enjoy tackling challenging problems and finding innovative solutions

Check the full job description here: <https://atomicmaps.io/data-engineer2>



GIS Analyst | City of Kirkland, WA | Remote in Washington

Why Kirkland?

Ranked as one of the most livable cities in America, Kirkland is an attractive and inviting place to live, work, and visit. We have big city vision while maintaining a small-town, community feel. If

you are a candidate with the desire to join an organization looking to innovate into the future, the City of Kirkland is the place for you!

Job Summary

This is an intermediate-level professional, technical, analytical, and customer-oriented position in the Information Technology Department. The role of GIS Analyst is primarily to support enterprise spatial systems, databases and applications to ensure usability, availability and security. The GIS Analyst facilitates all activities related to the design and maintenance of the city's enterprise spatial systems. This includes providing technical services, GIS solutions, complex analysis, and project management to all customers who use enterprise GIS technologies.

This position supports documenting, maintaining, and ensuring reliability of GIS platforms and related data. Analyzes business needs and processes; implements and adheres to city data accuracy standards and procedures; assists business process automation; performs complex GIS analysis; and helps develop and implement GIS solutions to meet those needs. The GIS Analyst works with Senior GIS Analyst/Programmers and may act as backup for the Senior GIS Analyst/Programmer as necessary. Under direction of the division manager, this position may be assigned to special projects as needed in accomplishing department initiatives and achieving strategic goals of the department and city.

Read more: <https://www.governmentjobs.com/careers/kirklandwa/jobs/4771621/gis-analyst?pagetype=jobOpportunitiesJobs>

Data Scientist II | Chewy | Boston, MA

Summary:

We are seeking a hard-working and passionate Data Scientist II to join our growing team. In this role, you will play a crucial part in empowering our Chewy Customer Care teams with cutting-edge data solutions that drive rapid innovation, informed decision-making, and outstanding customer and agent experiences. As a Data Scientist II, you will be a key contributor throughout the entire data science lifecycle, from data acquisition and preparation to model development, deployment, and communication of results. You will have the opportunity to work on diverse projects and contribute directly to the success of the company.

Responsibilities:

- Collect, prioritize, and prepare data for analysis from various sources, ensuring data quality and integrity.
- Conduct detailed exploratory data analysis using statistical techniques and visualizations to uncover patterns, trends, and insights.
- Construct new features from existing ones to improve model performance, including feature creation, transformation, and selection.
- Apply statistical methods (e.g., descriptive statistics, hypothesis testing) to understand data distributions, relationships, and draw meaningful conclusions.
- Select and build appropriate machine learning models (e.g., regression, classification, clustering) based on the problem and data characteristics.
- Evaluate model performance using relevant metrics (e.g., accuracy, precision, recall, F1-score), and fine-tune models to achieve efficient results.
- Interpret model results, identify key drivers and insights, and communicate findings optimally to both technical and non-technical stakeholders.
- Build compelling visualizations to present data insights and tell a clear and concise story that resonates with the audience.
- Work closely with cross-functional teams (e.g., product managers, engineers, business analysts) to understand business needs and translate them into data-driven solutions.

See more: <https://careers.chewy.com/us/en/job/6413944/Data-Scientist-II>

Keep Learning GIS



Google Earth Engine Tutorials by Amirhossein Ahrari

Looking to get started with Google Earth Engine? Check out this awesome resource:
<https://www.youtube.com/@amirhosseinahrarigeo>

Google Earth Engine is a geospatial processing service. With Earth Engine, you can perform geospatial processing at scale, powered by Google Cloud Platform. The purpose of Earth Engine is to:

- Provide an interactive platform for geospatial algorithm development at scale
- Enable high-impact, data-driven science

Make substantive progress on global challenges that involve large geospatial datasets

Geo Week Conference

- **Date:** February 10 -12, 2025
- **Location:** Denver, CO USA
- **Description:** The learning and networking nexus of the geospatial and built worlds.

Esri Federal GIS Conference

- **Date:** February 24–26, 2025
- **Location:** Washington, D.C., USA

Description: This conference brings together GIS professionals from various government agencies to explore how GIS technology is used to address complex challenges and drive digital transformation.

Going Places with Spatial Analysis



January 29–March 12, 2025 | No-Cost Massive Open Online Course

[Register Now →](#)

- Learn about spatial analysis and how location affects everything?
- Understand and quantify how places are related?
- Uncover deeper insights in your data?
- Predict situations in locations where data is not available?

Join ESRI's upcoming no-cost massive open online course (MOOC)—[Going Places with Spatial Analysis](#)—to explore these topics and more.

This self-paced course requires about 2-3 hours of learning time per week and includes:

- No-cost access to ArcGIS Online
 - Step-by-step exercises, expert videos, quizzes, and a discussion forum
 - Certificate of completion
-

Questions

Contact the **Data Lab** staff at DataLab-Support@elist.tufts.edu
or check out our website at DataLab.tufts.edu

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