Opportunity Title: Geospatial Analyst Fellow
Opportunity Reference Code: DOT2018-01

Organization	U.S. Department of Transportation (DOT)
Reference Code	DOT2018-01
How to Apply	A complete application package consists of:

- An application
- Transcript(s) – Click here for detailed information about acceptable transcripts
- A current resume/CV
- Two references

All documents must be in English or include an official English translation.

If you have questions, send an email to USDOT@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline	4/21/2018 12:00:00 AM Eastern Time Zone
Description	Are you ready to build a resource that will provide our communities across the Nation with the accurate, reliable data we need to understand the transportation system? Do you want to bring transformative change to traditional 2-D mapping techniques at the Federal level? Have you ever wanted to influence and improve the effectiveness of geospatial data at the national level? Are you obsessed with simplifying complex problems with data and visuals that easily convey information in new, understandable ways? Take an appointment with our team where you build new geospatial data sets and implement innovative geospatial analysis.

This post-graduate research project and developmental opportunity is currently available at the U.S. Department of Transportation. The appointment will be served within the Bureau of Transportation Statistics (BTS) in Washington, DC as a Geospatial Analysis Fellow.

The future of geospatial transportation datasets holds great promise as well as new challenges. The democratization of data and omnipresence of technology in transportation has created the opportunity for vast new empirical data resources with profound impacts on data velocity, volume and bias. These changes push us, as analysts and statisticians, to rethink our relationship with data. In this 24 hour a day instantaneous environment, the pressure to deliver fresh data is relentless. A constant call to balance the decennial, quinquennial or even annual data releases with near real time data and analysis exists for many data providers. You will explore opportunities to advance geospatial data resources that are appropriate for statistical analysis and you will build new data sets for BTS to use in analysis and publish to the world.

You will be using, adapting and transforming data and collection processes originally designed for other ends to provide new data for transportation analysis. You will learn to wrangle automobile, plane and ship probe data feeds into meaningful geospatial datasets, and extract data from remote sensing operations. You will learn to design and build innovative, new data
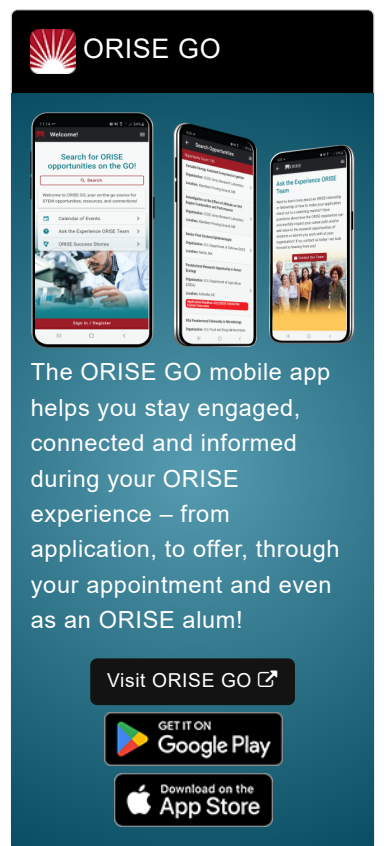
sets that capture emerging areas of transportation.

You will have the opportunity to develop close working relationships with other DOT offices, and other Federal agencies that maintain geospatial data and analytical capabilities, which can aid in the understanding of the transportation industry. You will participate in inter-agency efforts relating to the development and improvements of geospatial data and analysis applications, and you will conduct research on existing and emerging technologies, processes and approaches that can be used to enhance the geospatial analysis of transportation and then implement this research.

Finally, you will have the chance to assist in development and updates to the National Transportation Atlas Database (NTAD), a set of nationwide geographic databases of transportation facilities, transportation networks, and associated infrastructure.

Who are we? We are the U.S. Department of Transportation's Bureau of Transportation Statistics (BTS) Office of Spatial Analysis and Visualization (OSAV). The BTS is the Principal Federal Statistical Agency that provides objective, comprehensive, and relevant information on the extent and use of the Nation's transportation system, how well the system performs, and the effects of the system on society and the environment. The OSAV develops geospatial information and visualization tools, conducts spatial and network analyses, develops performance measures related to the transportation network and geographic accessibility provided by the network, prepares maps for BTS publications, coordinates the transportation layer of the National Spatial Data Infrastructure, and publishes the NTAD. OSAV employs high quality cartography and innovative web applications to produce relevant, high quality, timely, comparable, complete, and accessible geospatial products and statistical visualizations.

Stipend: $70,000
Professional Development: $2,500
Relocation : $2,000
Health Insurance Allowance: $3,000

Start date is flexible. You may start anytime between January and June 2018.

The USDOT is actively reviewing applications and is looking to fill positions as soon as qualified applicants are identified.

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and USDOT. The appointment is full-time at USDOT in the Washington DC, area. Participants do not become employees of USDOT, DOE or the program administrator, and there are no employment-related benefits

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Qualifications	Applicants must have received master's degree in a related field within the last five years. Preferred disciplines are Geographic Information Systems, Geography, Social or Behavioral Science, Computer Science, Information Systems, Mathematics, Statistics, Earth and Geosciences, or Engineering.

The ideal candidate will have a combination of the following:

- Ability to translate high level business requirements into detailed design specifications;
- Experience presenting results in a clear, effective, and attractive manner to inform next steps;
- Strong written and verbal communications skills;
- A self-starter with the ability to perform work with limited supervision and changing outcome goals;
- Knowledge of U.S. transportation systems;
- Ability to work across various offices and work units to obtain information, collaborate on data-related projects, and validate findings and conclusions;
- Ability to work with subject matter experts to identify and mitigate data limitations;
- Ability to develope scripts to support the automation, discovery, acquisition, collection, aggregation, processing, preparation, delivery, storage, analysis and publication of large datasets;
- Experience using various programming languages to create processes that identify variation, investigate patterns and perform data interpretation against large datasets;
- Knowledge of open and proprietary exchange formats used in GIS-specific applications, including: REST/JSON, GeoJSON, XML, geodatabases, Web Mapping Services (WMS), and Web Feature Services (WFS);
- Experience with the ESRI suite of products (ArcGIS Desktop, ArcGIS Server, ArcSDE, ArcObjects, JTX/Workflow Manager);
- Demonstrated knowledge and use of industry standard database tools and languages including standard SQL Oracle/Microsoft/Postgres Relational Databases and geodatabase extensions to relational databases, SQL.
- U.S. Citizen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree.
- **Discipline(s):**
  - **Communications and Graphics Design** (1 👁)
  - **Computer, Information, and Data Sciences** (16 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (10 👁)
  - **Mathematics and Statistics** (10 👁)
  - **Other Non-Science & Engineering** (5 👁)

- **Social and Behavioral Sciences** ([28 👁](#))