Who we are:

Transportation is so basic that many of us overlook its overwhelming importance in our daily lives. Practically everything used in our homes, offices, or schools across Tennessee – from furniture to food items to clothing – requires a large and complex transportation network. The Tennessee Department of Transportation provides citizens of Tennessee and travelers with one of the best transportation systems in the country. TDOT is a multimodal agency with responsibilities in building and maintaining roads, aviation, public transit, waterways, railroads, cycling and walking. Our involvement ranges from airport improvements to funding transit buses to planning for river ports. The Department of Transportation has approximately 3,500 employees with four statewide region facilities in Knoxville, Chattanooga, Nashville, and Jackson.

Data Visualization Engineering Technician 4
Planning Division – Forecasting and Visualization Section
$57,912 annually

Job Overview

The Data Visualization Engineering Technician 4 serves as a senior-level technical contributor based in headquarters within the Forecasting and Visualization Section of TDOT's Planning Division. This position supports the design, development, presentation, and maintenance of interactive dashboards, maps, and data visualizations products that empower data-informed decision-making across TDOT. This position reports to the Data Visualization Team Lead.

The Data Visualization Engineering Technician 4 collaborates with planners, analysts, Geographic Information Systems (GIS) specialists, data engineers and other technical teams to produce and present accurate, accessible, and user-centered visualization products. These products enhance TDOT's data storytelling, performance reporting, and public engagement efforts. Key tools used in this role include Power BI, ESRI ArcGIS Online, ESRI ArcGIS Pro, and related visualization and analytics platforms.

In addition to visualization development, this position assists in maintaining reusable visualization templates and documentation, applying accessibility and usability standards, and providing informal training and troubleshooting support. The technician is expected to contribute to continuous improvement in visualization practices by identifying opportunities to improve quality, efficiency, and consistency across the department.

Essential Job Responsibilities

Develop, present, and maintain dashboards, web maps, and interactive visualization that present transportation data and forecasting model outputs using tools such as Power BI, ESRI ArcGIS Online, and ESRI ArcGIS Pro.

Collaborate with data engineers, GIS staff, and planning analysts to integrate reliable, well-structured datasets into visualization platforms. Monitor data quality issues, troubleshoot visualization performance concerns, and ensure data accuracy across published content.

Apply industry and department standards and best practices for usability, accessibility, and visual clarity to support communication with diverse audiences. Assist in developing and maintaining standardized templates, style guides, and reusable

visualization components to ensure consistent quality across TDOT products and publications.

Optimize the speed and scalability of dashboards, particularly when working with large or complex datasets, ensuring smooth performance and usability.

Translate stakeholder needs into clear and actionable visual formats and iterate designs based on testing and feedback.

Assist in developing and maintaining standardized templates, color palettes, and layout styles to promote consistency across TDOT visual products.

Support the department's self-service business intelligence initiatives by preparing curated datasets, clear documentation, and training materials that empower internal users.

Maintain version control, metadata, and internal documentation for all published dashboards and visualization workflows to ensure accuracy and traceability.

Contribute to data governance efforts by ensuring visualizations follow established policies for security, accessibility, and public transparency.

Monitor emerging tools, libraries, and techniques in data visualization and recommend enhancements or improvements to existing systems and practices.

Qualifications

- High school diploma or equivalent
- 4 years of demonstrated competency in GIS, data visualization, data analysis, or business intelligence, preferably in a transportation or public sector setting
- Completion of the Engineering Technician Proficiency Program levels I through III.

OR

- High school diploma or equivalent
- 4 years of demonstrated competency in GIS, data visualization, data analysis, or business intelligence, preferably in a transportation or public sector setting
- Including at least one (1) year of experience with leading teams on assignments and/or training employees, including effective communication through active listening, and providing verbal and written instructions.

OR

- Associate degree
- 2 years of demonstrated competency in GIS, data visualization, data analysis, or business intelligence, preferably in a transportation or public sector setting
- Including at least one (1) year of experience with leading teams on assignments and/or training employees, including effective communication through active listening, and providing verbal and written instructions.

Relevant experience includes full-time work in a combination of the following areas: data visualization, business intelligence, transportation systems, GIS, and public sector data analysis.

Ideal Candidate

The Data Visualization Engineering Technician 4 is a detail-oriented and solution-driven professional who brings curiosity, creativity, and precision to their work. This individual thrives on making complex data more understandable and meaningful through accessible, high-quality visualizations. They are naturally collaborative, thrive in team environments, and communicate effectively with both technical and non-technical colleagues and audiences. The Data Visualization Engineering Technician 4 approaches problem-solving with patience and persistence, values consistency and accuracy, and takes pride in producing high-quality work. They are adaptable to evolving tools and processes and demonstrate a continuous learning mindset, actively seeking opportunities to improve outcomes for internal and external stakeholders.