

**MICHIGAN TECHNOLOGICAL UNIVERSITY
CLASSIFICATION DESCRIPTION**

Job Title: RESEARCH ENGINEER/SCIENTIST I –
TRANSPORTATION RESEARCH ANALYST
(pay grade 240)
Department: MICHIGAN TECH RESEARCH INSTITUTE
(Based in Ann Arbor, MI)
Salary Range: MINIMUM \$34,106 – MAXIMUM \$70,826
Exempt (Y/N): YES
Supervisor: RESEARCH ENGINEER/SCIENTIST II

POSITION DURATION DEPENDENT UPON EXTERNAL FUNDING
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SUMMARY: Fulfill the needs for a geospatial transportation research analyst with mathematical, programming, and GIS-remote sensing research background. Combine analytical skills with projects needing a variety of modeling, programming, and algorithm development opportunities. The position is based at MTRI in Ann Arbor, MI (www.mtri.org).

ESSENTIAL DUTIES AND RESPONSIBILITIES include the following. Other duties may be assigned.
Participate as an integral team member on multi-disciplinary research relating to applying technological skills to solving governmental and societal needs.
Provide technical assistance for transportation projects needing analytical and programming skills including remote sensing, mathematics, and coding of custom analysis scripts.
Contribute technical expertise to symposia, journal articles, and technical reports.
Present results to sponsor as appropriate.
Participate in proposal writing.

SUPERVISORY RESPONSIBILITIES:
Supervision will be exercised over student interns on a project-by-project basis.

QUALIFICATION REQUIREMENTS: To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

EDUCATION and/or EXPERIENCE:

REQUIRED:

Master's degree in transportation and logistics technology, or closely related field and 2 or more years of experience.

OR

Bachelor's degree in transportation and logistics technology, or closely related field and 5 or more years of experience.

OTHER SKILLS AND ABILITIES:

REQUIRED:

Ability to obtain a DoD security clearance, which requires United States citizenship.

Excellent interpersonal, oral, written, and presentation communication skills.

Demonstrated knowledge of geospatial issues in transportation and logistics including topics such as:

- expanding and improving rail networks
- assessing and understanding road and bridge condition
- developing and implementing vehicle tracking technologies
- modeling transportation fuel supply and logistics
- applications of remote sensing and GIS for transportation issues
- analyzing economics of transportation supply networks
- optimizing carbon-efficient transportation

Experience in developing applications with open source or proprietary-based tools.

Knowledge of geospatial software (ESRI, ERDAS).

Demonstrated experience with one or more programming languages (e.g., Python, VB.NET, C++, C#).

Demonstrated experience in statistical analysis using advanced mathematical concepts and one or more major statistical packages (e.g., SAS, JMP, SPSS, R).

Demonstrated ability to participate in team projects.

RESEARCH ENGINEER/SCIENTIST I – MICHIGAN TECH RESEARCH INSTITUTE

DESIRABLE:

Demonstrated ability to mathematically model data using MATLAB.

Experience in writing and applying KML for geospatial visualization.

Knowledge of Great Lakes, Alaska, national, and other regional transportation issues.

Previous participation in proposal writing.

Ability to communicate complex ideas clearly at meetings and symposia.