



UTC Project Information	
Project Title	Intelli-Viz –COMPREHENSIVE, HUMAN-CENTERED, RISK-BASED ONLINE PLATFORM FOR EVALUATION, VISUALIZATION, AND PRIORITIZATION OF BRIDGE PROJECTS
University	Florida A&M University
Principal Investigator	Neetesh Sharma
PI Contact Information	nsharma@eng.famu.fsu.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	IBT- ABC-UTC funds : \$43,627. Match funds: \$43,628
Total Project Cost	\$ 87,255
Agency ID or Contract Number	69A3552348322
Start and End Dates	January 1.2025 - Active
Brief Description of Research Project	<p>Many of the nation’s bridges are aging and require urgent attention for rehabilitation or replacement. Traditional bridge prioritization approaches do not account for the broader impacts of bridge failures on access to critical infrastructure or community resilience. This project aims to address the shortcomings of the existing systems by developing a decision-support platform that considers diverse performance metrics, including mobility, socio-economic well-being, and disaster resilience. Various national agencies have identified the need for computational platforms for varied purposes, such as the Natural Hazards Engineering Research Infrastructure (NHERI) Design Safe [1], SimCenter [2], funded by the National Science Foundation (NSF), and Interdependent Networked Community Resilience Modeling Environment (IN-CORE) [3], funded by the National Institute of Standards and Technology (NIST). The purpose of these platforms has been to improve disaster resilience by providing archives of data, state-of-the-art algorithms, and access to high-performance computational resources. However, these efforts have typically limited the use case to researchers instead of practicing professionals. While the proposed project is smaller than these cited efforts, the research focus and targeted user groups differ. The PI and Co-PIs will learn from these projects to implement best practices for data management, algorithmic integration, and long-term survivability. Implementing advanced prioritization methodologies requires data from multiple sources, optimization and statistical prediction techniques, and visualization tools to support decision-making. The platform will assess risk factors on bridges from routine wear to extreme disasters, enabling resilient</p>

	<p>strategies that strengthen evacuation routes and connectivity to essential services. Designed with a human-centered approach, the platform will prioritize bridge projects that improve safety, accessibility, and quality of life, particularly for underserved communities. An online platform will reduce the time and effort of practical applications, enhance communication, and amplify the impact of other research projects.</p>
<p>Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here</p>	<p>The outcomes will be tracked and reported once they are identified.</p>
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	<p>The impacts will be tracked and reported once they are identified.</p>
<p>Web Links</p> <ul style="list-style-type: none"> • Reports • Project website 	<p>https://abc-utc.fiu.edu/comprehensive-human-centered-risk-based-online-platform-for-evaluationvisualization-and-prioritization-of-bridge-projects/</p>