UTC Project Information	
Project Title	DEVELOPMENT OF ARCHITECTURE FOR GENERATIVE PRE-TRAINED TRANSFORMER (GPT) INSPIRED MODEL FOR BRIDGE ENGINEERING WITH APPLICATION TO SERVICE LIFE DESIGN, CALLED BRIDGEGPT.
University	Florida International University
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Funding Source(s) and Amounts Provided (by each agency or organization)	ABC-UTC funds: $70,000 Match funds : $35,000
Total Project Cost	$ 105,000
Agency ID or Contract Number	69A3552348322
Start and End Dates	January 1, 2024 - June 30, 2025
Brief Description of Research Project	A Generative Pre-trained Transformer (GPT) system can, if coupled with data, make a paradigm shift in our approaches to bridge design and construction. The research proposed in this project focuses on the development of BridgeGPT architecture, using bridge service life design as the first application. This is in keeping with US DOT Secretary of Transportation upper administration interest in the development of BridgeGPT, as expressed at the IBT/ABC-UTC kickoff meeting in May, 2023. At that meeting, the concept of BridgeGPT was included in the power point presentation. The SHRP2 R19A project has gathered a wealth of data on bridge service life design. However, the full potential of this data has yet to be utilized. Traditional methods of bridge design and maintenance, while reliable, can benefit greatly from the predictive power and adaptability of models like BridgeGPT. There is a crucial need to more closely relate cutting edge AI technology and bridge engineering to optimize service life design, reduce costs, and enhance infrastructure safety. This project aims to utilize the capabilities of GPT-like models, adapt them for bridge engineering, and create a tool that learns and improves over time.

Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The outcomes will be tracked and reported once they are identified.
Impacts/Benefits of Implementation (actual, not anticipated)	The impacts will be tracked and reported once they are identified.
Web Links • Reports • Project website	https://abc-utc.fiu.edu/research-projects/development-of-architecture-for-generativepre-trained-transformer-gpt-inspired-modelfor-bridge-engineering-with-application-toservice-life-design-called-bridgegpt/