



Research Project Name: Identification of Workforce Skills Sought in Transportation Industry: What do job ads look for?
Recipient/Grant (Contract) Number: Florida A&M University; Stony Brook University
Center Name: Rural Safe Efficient Advanced Transportation (R-SEAT) Center
Research Priority: Improving Mobility of People and Goods
Principal Investigator(s): Anil Yazici
Project Partners: -
Research Project Funding: \$65,793 (Federal request); \$17,736 (Non-Federal cost share)
Project Start and End Date: 6/1/2023 to 12/31/2024
Project Description: The objective of this project is to identify the workforce skillset that is pursued by DOTs based on recent job advertisements and identify potential variations with respect to urban density and locality (e.g., urban vs. rural). Transportation agencies compete with more resourceful technology and start-up companies to recruit and/or employ workforce that are well-versed in emerging topics such as autonomous systems, sensors, machine learning, and artificial intelligence. In addition, transportation agencies are mostly not in the job search radar of the workforce from fields such as computer science and electrical engineering who happen to possess the sought-after skills. Thus, it is important to 1) understand how to recruit and retain skilled workforce, 2) educate students from fields that DOTs traditionally recruit from (e.g., civil engineering, planning) with necessary skills and 3) train the existing workforce not to fall back in the technological advancement trend. The transformative potential of research can only be realized if the gap between the state-of-the-art and the state-of-the-practice is reduced. In the mid- to long-term, this can be achieved most effectively by educating the future generation of researchers and practitioners who embrace the same principles that lead to an accessible and multimodal transportation system. In the shorter term, the training and education programs for the existing workforce can start bridging the gap between research and practice. This project is the first installment of envisioned REAT Center projects that aims to fill this gap. In particular, this project will document the sought-after skills by DOTs by analyzing the job ads (obtained via DOTs directly or through job ad sites) with text mining tools to extract the common skills and qualifications. Accordingly, a survey for transportation professionals will developed to inquire their perspective on necessary skills.
US DOT Priorities: This project aligns with the USDOT the strategic objective of “Economic Strength and Global Competitiveness”, particularly the research priority of “Creating Pathways to Good Quality Jobs”
Outputs: <ul style="list-style-type: none">• Final project report was completed• The manuscript entitled “Transportation Job Ads: Do they Reflect the Transformation in the Transportation Sector?” was presented at 2025 Transportation Research Board Annual Meeting.• A webinar was given related to the project findings
Outcomes/Impacts: The findings informed the subsequent research that will identify strategies to recruit the transportation workforce with the necessary skillset.
Final Research Report: https://cdn.prod.website-files.com/656f7c66bed80d5266213809/6813e13d41ba9e33727f799a_UTF-8SBU%20-%20Yazici%20-%20Workforce%20Project%20-%20REAT%20Final%20Report%202025_FINAL.pdf