

# Nitesh Raj Shah

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## PROFESSIONAL SUMMARY

- Self-motivated and passionate Ph.D. candidate with 5+ years of professional and research experience in planning, policy, engineering, and data science to advance evolving transportation infrastructure and technologies
- Proven ability to manage collaborative projects and deliver products to the client's satisfaction, using analytical skills, such as Big Data, Machine Learning, and GIS, to support data-driven decisions
- Effective time and priority management skills, as demonstrated by achievement of ten publications, three research grants, 16 oral & poster presentations, and 12 awards & scholarships since 2018

## EDUCATION

**The University of Tennessee**, Knoxville, TN

*Ph.D. in Civil Engineering*; GPA 3.93 / 4.0

May 2020 – December 2022

*M.S. in Statistics*; GPA 3.91 / 4.0

May 2020 – December 2022

*M.S. in Civil Engineering*; GPA 3.96 / 4.0

August 2018 – May 2020

## PROFESSIONAL AND RESEARCH EXPERIENCE

**Oak Ridge National Laboratory (ORNL)**, Oak Ridge, TN

*Graduate Advancement Training and Education (GATE) Fellow*

August 2020 – Present

- Awarded a research fellowship (one of 20 awardees among 41 applicants) based on a holistic evaluation of research proposal, motivation letter, academic standing, & recommendations
- Evaluating operational energy and emission impacts of e-scooters using GPS location-based micromobility data with an aim to integrate shared micromobility into the MA3T-MC energy model developed by ORNL

**The University of Tennessee (UTK)**, Knoxville, TN

*Graduate Research Assistant*

August 2018 – July 2020

- Researched best practices and developed recommendations to establish a statewide nonmotorized vehicle count program for the Tennessee Department of Transportation (TDOT), resulting in the first authorship of an 80-page report; interviewed representatives of transportation agencies of Tennessee to assess existing count efforts
- Coordinated the TDOT project, a collaboration between the University of Tennessee Center for Transportation Research and the Toole Design Group; prepared project delivery plan and tracked progress to complete the project on time and on budget; communicated with the clients to understand their needs & expectations
- Conceptualized and prepared research proposals by conducting background research & drafting technical details; secured a \$32,000 grant from a national university transportation center and a \$4,000 grant from UTK for an international survey project

**World Resource Institute**, Washington DC

*Intern, New Urban Mobility Alliance (NUMO)*

May 2019 – August 2019

- Designed a preliminary version of an innovative toolkit to profile existing and emerging vehicles for regulation; classification referenced in 2020 Safe Micromobility International Transport Forum (ITF) report
- Devised a detailed instruction manual on using LEGO models as a communication tool for transportation planning; presented the project as a finalist for competition amongst interns

**Full Bright Consultancy (Pvt.) Ltd.**, Kathmandu, Nepal

*Civil/CAD Engineer*

May 2016 – January 2018

- Led a three-person team to prepare engineering drawings of 60+ high-speed railway bridges (total of 20 miles in length); automated tasks and implemented innovative techniques to reduce drafting time and resources by more than half
- Demonstrated effective leadership by managing and training four volunteers to conduct a travel time survey of Kathmandu Valley; analyzed the raw data that fed into the travel demand model to evaluate feasibility of mass transit options

## TECHNICAL SKILLS

- Relevant expertise: Transportation planning and policy, sustainable transportation, and transit design
- Analysis and mapping: ArcGIS (with Python script integration), QGIS, and TransCAD
- Technical software: Microsoft suite and Autodesk AutoCAD & Civil 3D
- Data management: Git and GitHub, SQL (PostgreSQL) and NoSQL (MongoDB), and Apache Spark
- Data processing & visualization: Python, Tableau, R, and Microsoft Excel
- Econometric modeling & machine learning: Stata, Python, R, JMP, MATLAB, and SAS
- Project management and collaboration tools: Notion, Asana, and monday.com