

SUHAIL ASGHAR

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EDUCATION

2025	M.S., Civil Engineering (Transportation), Penn State University   <b>GPA:</b> 3.93
2021	M. Tech., Transportation Engineering, National Institute of Technology, Warangal   <b>GPA:</b> 3.39
2019	B.Tech., Baba Ghulam Shah Badshah University, Rajouri   <b>GPA:</b> 3.42

PROFESSIONAL EXPERIENCE

2023-	Graduate Teaching and Research Assistant, Civil Engineering, Penn State University
2023	Graduate Teaching Assistant, Civil Engineering, Michigan Technological University
2022	Teaching Faculty, Civil Engineering, Model Institute of Technology
2021-2022	Research Intern, Transportation Engineering, National Institute of Technology, Warangal
2020-2021	Teaching Assistant, Transportation Engineering, National Institute of Technology, Warangal

RESEARCH INTEREST

▪ Travel Demand Modeling and Travel Behavior	▪ Emerging Transportation Technologies – Automated, Connected, Electric and Shared (ACES)
▪ Transportation System Impacts on Equity, Health, and Wellbeing	▪ Travel Commute Satisfaction
▪ Transportation Challenges for Smart, Equitable, and Sustainable Communities	▪ Statistical and Econometric Modeling
▪ Surveys and Data Collection Experiments	▪ Transportation Planning

RESEARCH PROJECT EXPERIENCE

2023-	<p><i>An Exploratory Analysis of Commuting Satisfaction and Travel Mode Dissonance Across the East Coast</i></p> <p>Conducted an in-depth study exploring commuting mobility patterns and satisfaction across diverse East Coast regions. The project examined barriers to current practices, analyzed commuter opinions and intentions, and assessed the impact of travel mode dissonance on overall well-being, ultimately informing policy recommendations to promote sustainable commuting and reduce emissions.</p> <p><b>Lead:</b> Literature review, Survey Development, data collection, data management, data analysis and technical communication. <b>Support:</b> Policy recommendation</p>
2024	<p><i>Zero Emission Vehicle Adoption Analysis Using California Vehicle Survey 2019 (Transportation Secure Data Center)</i></p> <p>Conducted an in-depth analysis of zero-emission vehicle (ZEV) adoption and usage using data from the 2019 California Vehicle Survey and Multiple Discrete Continuous Extreme Value (MDCEV) modeling. The study examined how socioeconomic characteristics, household composition, vehicle types, attitudes toward emerging transportation technologies, and spatial factors influence the adoption and operational patterns of plug-in hybrid and battery electric vehicles.</p> <p><b>Lead:</b> Literature review, data management, data analysis, econometric modeling. <b>Support:</b> Technical writing, policy recommendation</p>

- 2023-2024 *Analyzing Consumer Preferences Between Plug-in Hybrid and Full Electric Vehicles Using California Vehicle Survey 2019*  
 Conducted an analysis of consumer preferences between plug-in hybrid and full electric vehicles using data from the 2019 California Vehicle Survey. Employing a multinomial logit model, the study examined how factors such as vehicle performance, charging infrastructure, financial incentives, and demographic characteristics influence consumer choices.  
Lead: Literature review, data management, data analysis, econometric modeling, report writing, policy recommendation
- 2023-2024 *Factors Impacting Annual Mileage: Overview of California*  
 Conducted an analysis of factors influencing annual mileage using data from the 2019 California Vehicle Survey. The study examined the impact of employment status, vehicle access, transit use, and demographic characteristics on travel behavior.  
Lead: literature review, data analysis, data visualization, presentation
- 2021-2022 *Travel Behavior Analysis in Hilly Regions of Jammu & Kashmir, India*  
 Conducted a travel behavior analysis in hilly regions of Jammu & Kashmir, India, using Structural Equation Modeling (SEM) to examine the impact of anxiety and social norms on mode choice.  
Lead: literature review, survey development, data analysis, structural equation modeling, data management. Support: data collection, technical communication.
- 2020-2021 *Comparative Analysis of Traffic Assignment Methods*  
 Conducted a comparative analysis of traffic assignment methods to evaluate the efficiency and convergence rates of different algorithms used in transportation modeling. The study examined traditional and newly developed algorithms, including the Frank-Wolfe method, Bi-Conjugate Frank-Wolfe (Bi-CFW), and a modified path-based greedy algorithm.  
Lead: literature review, traffic assignment, programming. Support: technical communication.

## TEACHING ABILITY

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<sup>g</sup> – Graded, <sup>t</sup> – Instructed.

- 2025 Transportation Planning<sup>g</sup>, Civil Engineering Materials Lab<sup>t</sup>, Surveying Lab<sup>t</sup>  
 2024 Transportation Design<sup>t</sup>, Engineering Mechanics<sup>gt</sup>  
 2023 Pavement Analysis<sup>g</sup>  
 2022 Transportation Engineering II<sup>gt</sup>  
 2020-2021 Traffic Engineering Lab<sup>gt</sup>

## HONORS AND AWARDS

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- 2024 George A. Downs Endowed Graduate Fellowship, Penn State University (\$12,000)  
 2023 George A. Downs Endowed Graduate Fellowship, Penn State University (\$12,000)  
 2019 Graduate Aptitude Test in Engineering, National level eligibility test to secure scholarship (Fee + Stipend) for masters in India.

## CONFERENCE ACTIVITY

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- 2025 **Asghar, S.**, Patani, S., and Menon, N. "Exploring Adoption Trends and Usage Patterns of Zero-Emission Vehicles: An MDCEV Model Approach" *ASCE International Conference on Transportation and Development (ICTD)*, Glendale, AZ., 2025. [Talk]
- 2025 Bhattacharya, S., **Asghar, S.**, Menon, N., and Gawade, M. "Stick or Shift? Analyzing the Evolution of Travel Behavior Among Young Adults in the United States" *104<sup>th</sup> Annual Meeting of the Transportation Research Board*, Washington, D.C., 2025. [Poster]
- 2024 **Asghar, S.**, Kadali, B.R., Menon, N., (2024). "Exploring Travel Anxiety in Hilly Regions: The Role of Travel Attitudes and Perception" *ASCE International Conference on Transportation and Development (ICTD)*, Atlanta, GA., 2024. [Poster]
- 2023 **Asghar, S.**, and Kadali, B. R., (2023). "Assessing the Impact of Anxiety and Social Norms on Travel Behaviour in Hilly Regions" *102<sup>nd</sup> Annual Meeting of the Transportation Research Board*, Washington, D.C., 2023. [Poster]

## SUBMITTED MANUSCRIPTS

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- Asghar, S.**, Kadali, B.R., Menon, N. "The Interplay of Anxiety, Social Norms, and Companionship on Travel Behavior in Hilly Regions: A Case Study of Jammu and Kashmir, India". [In review]
- Asghar, S.**, Patani, S., and Menon, N. "Exploring Adoption Trends and Usage Patterns of Zero-Emission Vehicles: A Multiple Discrete-Continuous Extreme Value (MDCEV) Model Approach" [Working Paper]

## WORKSHOPS AND INTERNSHIPS

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- 2024 Workshop on Multivariate and Multiple Discrete-Continuous Choice Modeling Methods by TBD National Center, Atlanta, GA.
- 2024 Graduate Assistant Teaching Academy, Penn State University
- 2022 Workshop on Structural Equation Modeling Using SPSS and AMOS
- 2021-2022 Internship on Travel Behavior Analysis in a hilly region, National Institute of technology, Warangal

## TECHNICAL SKILLS

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\* - basic; ^ - intermediate; \$ - expert

Programming	Python <sup>^</sup> , R <sup>*</sup>
Macro/Microscopic Modeling	VISUM <sup>*</sup> , VISSUM <sup>*</sup> , HCS <sup>^</sup>
Data Analysis	SPSS <sup>\$</sup> , AMOS <sup>\$</sup> , Excel <sup>\$</sup>
Econometric Modeling	NLOGIT <sup>\$</sup> , GAUSS <sup>^</sup>
Data Visualization/Mapping	Tableau <sup>\$</sup> , QGIS <sup>^</sup>
Survey Design/Deployment	Qualtrics <sup>\$</sup> , CloudResearch <sup>\$</sup>

## AFFILIATIONS AND INVOLVEMENT

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- 2025 *Vice President*, Graduate and Professional Student Council, Penn State University
- 2024 *Volunteer*, Global Ambassador, Penn State University
- 2024 *Secretary*, Graduate and Professional Student Council, Penn State University

2018-2019     *Student Council Member*, Baba Ghulam Shah Badshah University  
2018           *Coordinator*, Placement Cell, Baba Ghulam Shah Badshah University

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## REFERENCES

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**Dr. Nikhil Menon**

Senior Engineering Associate

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20 South Charles Street, Suite 406, Baltimore, MD 21201

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**Dr. Sofia M. Vidalis**

Associate Professor of Civil Engineering

Penn State University

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**Dr. B Raghuram Kadali**

Assistant Professor of Transportation Engineering

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Telangana, India. 506004.

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