

Curriculum Vitae

Dr. Vishwajeet Kishore Verma

Center of Transport Research

Dept of Civil, Structural and Environmental Engineering

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Profile Summary

- Have a PhD and M. Tech in Transportation Engineering with 2 years of industry and 1.5 years of postdoctoral experiences development of bike library for workplaces, Road Development Master Plan, Urban Roads DPR & FPR, Travel Demand Modelling and Bus Transport.
- Research Interest: Transportation Planning, Public Transport, Survey Methodology Design, Decision Analysis, Market Segmentation, Data Science and Machine Learning.

Technical Skills

- Software Packages: VISUM, ArcGIS, Google Earth Pro, SPSS, AutoCAD, Civil 3D.
- Programming Language: R Studio (Advance Level), Python (Intermediate Level).
- Version Control: Github
- Graphic Tool: Adobe Illustrator, Adobe Photoshop.

Professional Experience

Employer	Role	Tenure
Trinity College Dublin, Dublin, Ireland	Research Fellow	Jan 19 th , 2026 – Present
Indian Institute of Technology Bombay, Mumbai	Research Scientist	June 18 th , 2025 – Dec 9 th , 2025
	Research Associate	Feb 11 th , 2025 – June 16 th , 2025
Indian Institute of Technology Roorkee, Roorkee	Research Scholar	Jan 5 th , 2018 – Jan 24 th , 2025.
Mott MacDonald Pvt. Ltd., New Delhi	Graduate Engineer – Highway	Nov 6 th , 2017 – Jan 4 th , 2018.
Vasuprada Consultants LLP, New Delhi	Engineer (Transport)	05 th Aug 2016- 31 st July 2017
Central Road Research Institute, New Delhi	Project Intern	1 st Sep 2015 – 10 th June 2016
	Summer Intern	20 th May 2015 – 20 th July 2015

Education

Qualifications	University/Board	Year	Score
Ph.D. in Transportation Engineering	Indian Institute of Technology Roorkee, India	2025	8.3 CGPA
M. Tech in Transportation Engineering	National Institute of Technology Surathkal, Karnataka	2016	8 CGPA
B. Tech in Civil Engineering	JNTU Hyderabad	2014	81.4 %

Peer Reviewed Journal Publications

Programming Codes

- Vishwajeet Kishore Verma, Rajat Rastogi (2023) RStudio Script for Exploring Stakeholders' Perceived Hierarchy about Transit Service Quality Attributes. DOI: 10.24433/CO.9822515.v1

ESCI/SCI/SCIE

- Vishwajeet Verma and Rajat Rastogi (2026). Revisiting Transit Performance Evaluation in the Context of Developing Countries. Public Transport. Article No. 366, DOI: 10.1007/s12469-024-00366-7 (ESCI, IF 3.2, Q2)

2. Vishwajeet Verma and Rajat Rastogi (2024). How Do Stakeholders Perceive Transit Service Quality Attributes? – A study through Fuzzy-AHP. Expert Systems with Applications Journal. Science Direct. DOI: 10.1007/978-981-16-99252_2 (SCIE, IF 11.5, Q1)
3. Vishwajeet Verma and Rajat Rastogi (2026). Exploring Transit Passengers and their Satisfaction with Service Quality through Priori Approach of Segmentation Analysis. (Submitted)
4. Vishwajeet Verma and Rajat Rastogi (2026). Analysing Passengers' Preferences and Perceptions on Service Quality of a Transit: Integrating GUT Matrix Approach and IP Technique to arrive at Management Schemes. (Under Review)
5. Vishwajeet Kishore Verma and Rajat Rastogi (2026). Transit Service Quality: Integrating Machine Learning as Derived Importance Method with IP Technique to Arrive at Management Schemes of Four Different Transit Systems. (Submitted)
6. Vishwajeet Kishore Verma and Rajat Rastogi (2025). Development of Comprehensive And Inclusive Transit Performance Evaluation Framework for Public Transport System. (Submitted)

Scopus

1. Verma, V.K, Rastogi R. (2025) Standardization of Commuter Perception Survey to Measure Transit Service Quality – An Indian Study, Transportation Research Procedia, Volume 82, 2025, Pages 791-821, ISSN 2352-1465, DOI: 10.1016/j.trpro.2024.12.072. (Scopus)
2. Verma, V.K., Rastogi, R. (2023). Is CAWI-Based Transit Passengers' Satisfaction Survey Feasible in India?—Insights During COVID-19. Lecture Notes in Civil Engineering, vol 347. Springer, Singapore. DOI: 10.1007/978-981-99-2556-8_5 (Scopus)
3. Verma, V., Rastogi, R. (2022). An Overview of Approaches and Methods for Evaluating Public Transport Performance. Lecture Notes in Civil Engineering, vol 220. Springer, Singapore. DOI: 10.1007/978-981-16-9925-2_2 (Scopus)

Peer Reviewed Conferences

1. Vishwajeet Kishore Verma and Rajat Rastogi (2026). Analyzing Passengers' Preferences and Perceptions on Service Quality of a Transit: Integrating GUT Matrix Approach and IP Technique to arrive at Management Schemes. Presented in 17th WCTR held at Toulouse, France during July 6-11, 2026.
2. Vishwajeet Verma and Rajat Rastogi (2025). Post COVID-19 Behavioural changes in Passengers' Access-Egress Travel to Public Transport and It's Service Quality. Presented in EASTS 2025 International conference held on Sep 1st – 4th, 2025 at Surakarta, Indonesia. [\[Link\]](#)
3. Vishwajeet Verma and Rajat Rastogi (2023). Standardization of Commuter Perception Survey to Measure Transit Service Quality – An Indian Study. Presented in 16th International conference WCTR2023 scheduled at Montreal (Canada) during July 17-21, 2023. DOI: 10.1016/j.trpro.2024.12.072
4. Vishwajeet Verma and Rajat Rastogi (2023). Analysing Stakeholders' Perceived Hierarchy of Transit Service Quality Attributes' using Fuzzy-AHP. Presented in 102nd Transportation Research Board Annual Meeting, Washington D.C (USA) during Jan 8-12, 2023.
5. Vishwajeet Verma and Rajat Rastogi (2022). Transit Performance Evaluation - Approaches and Way Forward. Presented in 81st IRC Annual Meeting Conference at Lucknow, India during Oct 8 - 11, 2022. DOI: 10.13140/RG.2.2.15849.36965
6. Vishwajeet Verma and Rajat Rastogi (2022). Is CAWI-based transit passengers' satisfaction survey feasible in India? – Insights during COVID-19. Presented in 2nd Transportation Infrastructure Projects: From Conception to Execution (TIPCE) held at Indian Institute of Roorkee (India) during Sep 14-17, 2022. DOI: 10.1007/978-981-99-2556-8_5
7. Vishwajeet Verma and Rajat Rastogi (2022). Measuring Passengers' Perception to Evaluate Competitive Public Transport Corridors – How to Collect Required Data? Presented in 4th Bridging Transportation Researchers (BTR) Conference, during Aug 04-05, 2022.
8. Vishwajeet Verma and Rajat Rastogi (2019). An Overview of Approaches and Methods for Evaluating Public Transport Performance. Presented in 5th International Conference of Transportation Research Group of India, Bhopal (India) during Dec 18 - 21, 2019. DOI: 10.1007/978-981-16-9925-2_2

9. Vishwajeet Verma and Rajat Rastogi (2019). Planning and Optimising Service of a Public Transportation System. Presented in International conference in Transportation Infrastructure Projects: Conception to Execution held at Indian Institute of Roorkee, (India) during Jan 07th -10th, 2019.

Industrial Projects

#6 Review of Traffic Dispersal Options in Thane Borivali Twin Tunnel, Mumbai

Role : Research Associate/Research Scientist

Institution : IIT Bombay, India

Advisor : Prof. P. Vedagiri, Transportation System Engineering, Civil Engineering Dept., IIT Bombay.

Duration : Feb 2025 – Dec 2026.

Roles and Responsibilities

- Analyzing technical aspects of traffic dispersal of traffic entering and exiting from the Twin Tunnel.
- Assisting and supervising teams in executing traffic surveys program, data collection, and analyzing those.
- Preparing reports, presentations and attending meetings and coordinating with the stakeholders.

#5 Freelancing : Technical Expertise to Sponsored Research and Consultancy Projects.

Role : Research Consultants (Independent) :

Clients : Industrial Organizations

Duration : Feb 2025 – Present

Roles and Responsibilities

- Formulating Research Methodologies
- Decision Making Analysis
- Questionnaire Design
- Passenger Satisfaction Survey Data Analysis
- HH Travel and Socioeconomic Survey data analysis and Report writing
- Guiding Team Members

#4 Project : Road Master Plan, Saudi.

Role : Graduate Engineer-Highway

Client : Outsourcing to Saudi Transport Planner Team.

Duration : Dec 2017 – Jan 2018.

Tools : Auto CAD.

Roles and Responsibilities

- Designing a street Parking layout along city roadways.
- Designing LRT Station, Bus Stop, and Driveways on the study area.

#3 Project : Mubarak Al Kabeer Port, Kuwait.

Role : Graduate Engineer-Highway

Client : Al-Jazera Consultants, Kuwait.

Duration : Nov 2017 – Dec 2017.

Tools : Auto CAD, Civil 3D.

Roles and Responsibilities

- Fixing Internal Roads and off-street Parking Layouts.
- Designing those roads and parking driveways.
- Designing suitable Traffic Signs, Road Marking around and along roadways.

#2 Project : Bihar Road Master Plan Phase-2.

Role : Junior Planner

Client : BSRDCL

Duration : Oct 2016 – July 2017.

Tools : Arc GIS, Auto CAD, Google Earth.

Roles and Responsibilities

- Identifying Grid Road Network to improve mobility and connectivity to district headquarters and regional development opportunities.

- Bypasses' planning and its preliminary feasibility studies.
- Establishing radial road connectivity to major population centres with Headquarters, Institutional Centres, Public welfares centres and tourist and tourism attractions centres.
- Analysing, managing, and dealing with Arc GIS spatial database.
- Digitizing road network and its databases for EMM model platform.

#1 Project : Preparing DPR of Dhanbad Urban Roads.

Role : Highway Engineer

Client : JUIDCO

Duration : Aug 2016 – Oct 2016

Tools : Arc GIS, AutoCAD.

Roles and Responsibilities

- Project Roads Identification to mark regional development in the city based on Land Use Maps.
- Developing corridors and their functional improvement plans.
- Roads Designing Upgradation i.e., Bypass, Alignment, Elevation, SSD plans.
- Traffic Impact Studies on corridor surrounding areas.
- Supervision of all kinds of Traffic Surveys i.e., Intersection Traffic Volume Counts, Junctions Pedestrians Counts, Parking Survey, Speed Delay Survey, Axle Load survey and O-D survey.
- Analysis and modelling of Traffic Survey data.
- Delineating TAZs and analysing trip characteristics.
- Traffic volume demand forecasting.
- Conducting Highway Structures Inventory survey and future recommendations.
- Recommending Road Sign Marking based on IRC: 35-2015; IRC: 67-2012.

Research Projects

#4 Postdoc Project : Bike Library for Workspace Locations.

Role : Research Fellow

Institution : Trinity College Dublin, Ireland.

Advisor : Dr. Brian Caulfield, Professor at Trinity College Dublin, Ireland.

Duration : Jan 2026 – Present.

Tools : R-Studio, Python, ArcGIS

Roles and Responsibilities

- TBD.

#3 Ph. D Thesis : Development of A Performance Evaluation Framework for Public Transit Systems. [\[Link of Thesis\]](#)

Role : Research Scholar

Institution : IIT Roorkee, India

Advisor : Dr. Rajat Rastogi, Professor Transportation Engineering Group, Civil Engineering Group, IIT Roorkee.

Duration : Jan 2018 – Dec 2024.

Tools : R-Studio, Python, ArcGIS

Roles and Responsibilities

- Formulating Research Methodology
- Survey Methodology Design, Execution, and Data Collection from Public Transport Users.
- Data Analysis using statistics and Creating ML models.
- Formulating policy strategies.
- Attending Conferences, Manuscript Drafting, and Giving Presentations.

#2 PG Thesis : Bus Lane Capacity Estimation and Frequency Optimization.

Role : Project Intern

Institution : CSIR-Central Road Research Institute, New Delhi, and NIT-Karnataka

Advisor : Senior Scientist **Dr. Ch. Ravi Sekhar** at **CSIR-CRRI**, Professor **Dr. A. U. Ravi Shankar** at **NIT Karnataka Surathkal**

Duration : Sep 2015 – Jun 2016.

Tools : VISUM, SPSS, Matlab.

Roles and Responsibilities

- To conduct Questionnaire and Video-graphic Survey.
- Estimating Bus Dwell Time and Hourly Demand at bus stops.
- Performing preliminary bus passengers survey data analysis.
- Developing the objective model function for optimization.
- Writing the optimization program in MatLab interface.
- Bus Travel Demand assignment using Time-Table Assignment and Headway based assignment method in VISUM.
- Estimating the bus lane capacity for the study corridor.

#1 Intern Project : Bus Travel Demand Assignment.

Role : Summer Intern
Institution : CSIR-Central Road Research Institute, New Delhi.
Advisor : Senior Scientist **Dr. Ch. Ravi Sekhar** at **CSIR-CRRI**.
Duration : May 2015 – July 2015.
Tools : VISUM, MS-Office.

Roles and Responsibilities

- Performing household survey data analysis.
- Preparing network model Using VISUM simulation software.
- Developing 4 stage travel demand modelling for Bus Travel Demand for New Delhi.
- Assigning the travel demand to the network supply model in VISUM.

Fellowships/Awards

- **Dean of Resources and Alumni Affairs, IIT Roorkee**

1 Lakh Rupees travel grant to present research paper and attend 102nd TRB conference in Washington DC (USA), 2023.

- **International Steering Committee for Travel Survey Conferences (ISCTSC)**

100 Euros grant to attend 12th ISCTSC conference in Lisbon, Portugal, 2022.

- **MHRD Scholarship to study M. Tech (2014-16) and PhD (2018-2022).**

- **St. Mary's Group of Institutions, Hyderabad**

1st Prize in Academic Award for bachelor's in civil engineering.

Teaching/Administration/Professional Activities

- **Professional Membership**

IRC (Indian Road Congress) - Lifetime Since 2022.

- Teaching Assistant of NPTEL UG and PG level course “**Geometric Design of Highways**” and “**Railway Engineering**” for Autumn Semester since 2022 to 2024.

- PhD scholar representative in Departmental Research Committee (DRC) at IIT Roorkee. 2020 to Dec 2021.

- Been Co-Ordinator & In charge of “Transportation & Accommodation” and “Registration” Committees for 1st and 2nd editions of international conference TIPCE at IIT Roorkee India.

References

1. Dr. Brian Caulfield
Professor at Civil, Structural and Environmental Engineering, Trinity College Dublin, Ireland.
Email: Brian.caulfield@tcd.ie Webpage: <https://www.tcd.ie/research/profiles/?profile=caulfib>
2. Dr. P. Vedagiri
Professor at Transport System Engineering, Civil Engineering Dept., IIT Bombay, Mumbai, India.
Email: transpoveda@gmail.com ; Webpage: <https://www.civil.iitb.ac.in/~vedagiri/>
3. Dr. Rajat Rastogi
Professor at Transport Engineering Division, Civil Engineering Dept., IIT Roorkee, Roorkee, India.
Email: rajat.rastogi@ce.iitr.ac.in ; Webpage: <https://civil.iitr.ac.in/CE?UId=rajatfce>

4. Dr. Ravi Sekhar
Chief Scientist, Transport Planning Division, CSIR- CTRI, New Delhi, India.
Email: chalumuri.ravisekhar@gmail.com ; Webpage: <https://crridom.gov.in/sites/default/files/staff-biodata/Ravi-Sekhar-17-11-2021.pdf>