Vipul Garg

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Recent master's graduate skilled in transportation planning, multi-modal transportation modelling, road safety modelling, roadway geometric design and data analysis. Positive attitude and commitment to excellence with strong communication and technical writing skills. Leading and managing multiple projects, while maintaining attention to detail, and quality.

PROFICIENT IN SKILLS AND COMPETENCIES

- Transportation Planning
- Demand and Road Safety Modelling
- Technical report writing
- Spatial Analysis Tools – ArcGIS, Google Maps
- Data Analysis Tools – R, Python (Basic), SQL, SPSS, Advanced Excel
- Modelling – VISUM, Synchro, VISSIM
- Design Software – AutoCAD, Qualtrics

RELEVANT EXPERIENCE

Research Assistant ***Kelowna***
Sustainable Transport Safety (STS) Lab, UBC Okanagan ***Sept 2017-May 2019***

- Designed user-interface of a web-based Road Safety Planning known as IHSPM to automate the development and application of macro-level collisions prediction models.
- More than 75% of transportation professionals from the City of Kelowna agreed with the overall system performance and usability in road safety planning.
- Designed an online residential selection, travel behavior and attitudinal retrospective survey with over 500 respondents in Qualtrics.

Transportation Data Analyst (Research Assistant) ***Vancouver***
School of Population and Public Health (SPPH), UBC Vancouver ***Feb-Aug 2018***

- Conducted comparative assessment of walkability measures: Implications for policy and planning.
- Using inflated and non-inflated generalized linear models, identified that the walkability index is a better predictor of walking behaviour in comparison to walkscore.

Research Fellow ***Delhi, India***
Transportation Research and Injury Prevention Programme, IIT Delhi ***May-July 2016***

- Compiled household travel survey for 200 households living in informal settlements in Delhi.
- Plotted trip ends of all respondents on Google Maps for travel behavior study.
- Created shapefiles of the built-up area (Delhi) for the years 2005 and 2015 in ArcGIS to document urban sprawl.

RELEVANT PROJECTS

Sustainable transport safety: Applying updated community-based macro-level collision prediction models for Kelowna using manual and automated tools
Master's Thesis (Guide: Dr. Gordon Lovegrove)

- Updated community-based macro-level collision prediction models for the city of Kelowna using negative binomial and full Bayesian modelling techniques.
- Applied the developed models in the black-spot programs to identify and rank collision prone zones and define series of macro-level collision modification factors.

Mode Choice Modelling: Implications for GHG emissions
Guide: Dr. Ahmed Idris (UBC Okanagan)

- Developed multinomial logit mode choice models for the city of Kelowna for vehicular, transit and non-motorized mode choices.
- Forecasted percentage contribution of each mode choice to GHG emissions.
- Proposed relevant active transportation and TDM strategies to check for emissions.

EDUCATION

Master of Applied Sciences in Transportation Engineering **2017-2019**
***University of British* Columbia** **GPA: 4.30/4.33**
Relevant Courses:

- Urban Transportation Planning
- Sustainable Land Use and Transportation (Travel Demand Modeling)
- Transportation Emissions
- Data Analytics
- Road Safety Modelling

Bachelor of Technology in Civil Engineering **2013-2017**
National Institute of Technology Kurukshetra, India **GPA: 9.75/10**
Relevant Courses:

- Transportation Engineering – 1
- Transportation Engineering – 2

HONORS AND ACHIEVEMENTS

- **University Graduate Fellowship** (UGF) holder at UBC for academic excellence.
- Selected among 100 students from 40 educational institutes in India to receive **O.P Jindal Engineering and Management Scholarship** for academic excellence in undergrad.
- Received academic prize and merit scholarship for 1st position for two consecutive years in undergrad.
- Selected among 20 students in India to receive **Summer Research Fellowship** at **IIT DELHI** in Civil Engineering.

MEMBERSHIPS AND VOLUNTEER INVOLVEMENT

Institute of Transportation Engineers **Sept 2017-Present**
Member

- Active member of CITE student chapter. Participated in Traffic Bowl – Edmonton 2018 CITE conference.

Research Volunteer **June-July 2018**
Sustainable Transport Safety Lab

- Volunteered for day and night time bike testing for the ArroWhere Safety Vest Redesign Project to devise a solution to ArroWhere's safety design vest problem using UBC's Instrumented Probe Bike (IPB) safety research technology.