Hesam Hafezi

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June 11th, 2018

30 Forensic Engineering
40 University Avenue, Suite 800
Toronto, ON, M5J 1T1

RE: Cover Letter and CV

Dear Recruitment Manager:

Please accept this letter and the accompanying CV as my application for the position of Transportation Engineer in 30 Forensic Engineering. I am excited by the opportunity to continue applying my transportation knowledge, expertise, and leadership skills in a rewarding career with the 30 Forensic Engineering. Transportation planning is more than a career for me, it is a passion. Through my engineering and transportation education, I have developed both the soft and technical skills needed to succeed as the Transportation Engineer with the 30 Forensic Engineering.

As a Transportation Engineer and Graduate Research Assistant, I have over five years of experience successfully working on various transportation and urban development projects, including public transit planning, travel demand forecasting, multi-modal simulations, and big data analysis. These projects included extensive collaboration with both internal and external partners, consultants, key stakeholders, the general public, and municipal councils. I'm highly experienced in conducting quantitative and qualitative analyses of transit and multi-modal transportation planning projects. I have received a silver medal at the 62nd World Exhibition on Invention, Research and New Technology, Belgium for a Bus Scheduling Model (BSM) system that I developed during my Master's Degree. The model includes ridership forecasting, impact evaluation of alternative timing plans and geometric changes on service reliability, and assessment of bus rapid transit.

I am very proficient with Microsoft office and statistical programs. I have analyzed numerous databases, including Travel Survey Data, Transit Ridership, Annual Average Daily Traffic, Canadian Vehicle Survey, Regional Household Travel Diary Survey, Regional Municipality Geodatabase, etc. These analyses included estimating parameters and numbers to build and apply various models, and to derive policy and business decisions from them. I am familiar with ArcView GIS and I have used it for various mapping and analysis, including shortest path estimation, cartography, spatial analysis, etc. I am also familiar with programming and I have used it for various developing and analysis of large databases. I led a local sustainability research project with the aim to explore commuter attitudes and advocate for public transportation. Working closely with other team members, I have conducted a web-based travel survey, including proposal writing, ethics approval application, survey design, implementation, and collection. I analyzed data from this survey and modeled mobility patterns. I communicated the results in clear, precise English and I have presented results at the 2017 and 2018 Transportation Research Board (TRB) conference in Washington D.C., US. I have assisted other team members in various projects, including active transportation studies, mode choice modeling, tour modeling, and preparation of technical reports.

I have a wide range of technical skills, and planning and organizational abilities, with a track record of accomplishments in transportation planning/traffic engineering. I have been 2015-16 Vice President of Academic Affairs, Dalhousie Association of Graduate Students (DAGS), and developed and maintained constructive relationships with university administrators and other Canadian universities. As a volunteer member of the Canadian Society for Civil Engineering (CSCE), I have assisted the organizing committee at the

2014 Annual CSCE Conference in Halifax, Canada. Furthermore, I have been a member at large of accessibility committee and addressed the needs of students with disabilities and created a supportive environment.

I completed my PhD studies, which focussed on the development of an advanced travel demand forecasting model, based on population cohorts with homogeneous time-use activity. This model is part of an integrated mobility model that is useful to advance transportation demand management and various transport policy scenarios. I hold an MSc degree in Civil Engineering with particular interest in Transportation Engineering, and a BSc degree in Civil Engineering.

I am always seeking a challenging position to expand my engineering knowledge, experiences, and my field of expertise. I am extremely self-motivated and results-oriented, and I work productively and efficiently with minimal supervision. I am accustomed to setting my own goals and deadlines, and I work well under pressure. I work well in a dynamic team environment, and I have effectively supervised the work of 3-5 junior team members in various data collection, technical report preparation, and transport modeling projects. I am familiar with key local, regional, and national transportation master plans and policies. I have excellent communication skills (oral and written) and experience in public speaking. I have attached my CV, which outlines the details of our education, experience, and personal information.

I am excited by the opportunity to talk with you more about this position, and to answer any questions you may have about my qualifications. I believe my combination of practical work experience and solid educational experience are an excellent match for the requirements of your position. In particular, I think my skills and experience in the preparation of technical drawings and simulations from field measurements, travel demand forecasting, and preparation technical reports based upon sound investigations and analysis, make me a good match for this position and can add value and insight to the mission of the 30 Forensic Engineering.

I look forward to hearing from you.

Sincerely,
Hesam Hafezi

Hesam Hafezi

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HIGHLIGHTS

- Over 5 years of work experience in projects on travel demand management (TDM), geometric designs, traffic simulation modeling, and big data analysis.
- Experienced in assessing multi-modal transportation systems and integrated mobility plans.
- Experienced in evaluating and producing geometric designs of roadways and intersections.
- Assisted transportation group project management relating to task delivery, budget management, quality control, and supervised the work of 3-5 junior team members on various transportation projects.
- Strong analytical and problem-solving skills, and expertise in preparing transportation planning and traffic engineering reports, traffic data collections, survey designs, and ethics approval applications.
- Familiar with transportation guidelines, standards, and regulations including the Ontario Traffic Manual, Geometric Design Guide for Canadian Roads, and other TAC and Ministry of Transportation of Ontario publications.
- Eligble to register as P.Eng.

TECHNICAL SKILLS

VISSIM, VISUM, EMME, MOVES.
SPSS, STATA, Minitab, MATLAB, LINGO, MS Office.
AutoCAD, Civil 3D/Land Desktop, ArcGIS.
Primavera Project Planner, Opinio.

EDUCATION

Ph.D., Civil/Transportation Engineering and Planning **2013-2018**
Department of Civil and Resource Engineering, Dalhousie University, Halifax, Canada.

M.Sc., Civil/Transportation Engineering **2010-2012**
Department of Civil and Structural Engineering, The National University of Malaysia, Malaysia.

B.Sc., Civil Engineering **2004-2008**
Department of Civil Engineering, Tehran, Iran.

WORK EXPERIENCE

Graduate Research Assistant **2013-2018**
Department of Civil and Resource Engineering, Dalhousie University, Halifax, Canada.

- Developed an agent-based travel demand forecasting model system to micro-simulate time use activity patterns, tour mode choice decisions, and identify population clusters based on their mobility patterns.
- Estimated trip generation/attraction and scheduling decisions of travelers with an average accuracy of 82%.
- Investigated the effects of 8 different traffic scenarios to reduce traffic congestion and transport-related greenhouse gas (GHG) emissions.
- Led a local sustainability oriented project and conducted travel survey data to explore commuter travel patterns and forecasted ridership.
- Assisted in teaching undergraduate courses, including: Optimization Methods in Civil Engineering, Geographic Information Systems (GIS), and Project Management.

Transportation Planning Research Assistant **2010-2013**
Sustainable Urban Transport Research Centre (SUTRA), Malaysia.

- Developed a transit scheduling model system to estimate travel time and predict transit ridership.
- Investigated the impact of 3 major alternative operational scenarios, including bus rapid transit (BRT), express bus service, and signal phasing and timing on transit level of service (LOS).
- Developed an advanced application in MS Excel to analyze various transportation databases, including traffic volume, travel time, vehicle speed profiles, and pedestrian and bicycle counts.
- Analyzed the effect of public transport services on people's quality of life, and assisted in preparation of traffic and transit management plans (TTMP).

Transportation Engineer **2008-2010**

Beton Aseh Consulting Engineers, Iran.

- Analyzed transit travel time and conducted intersection delay/queue studies to evaluate alternative planning solutions and traffic signal designs.
- Produced geometric and as-built designs of a 35-kilometer two-way highway, including municipal roads and intersections using AutoCAD and Civil 3D/Land Desktop.
- Prepared detailed traffic modeling and analyzed traffic data to identify changes in traffic pattern types and trends.
- Prepared presentations, proposals, and participated in regular meetings with both internal and external partners, consultants, and municipal councils.

Transportation Engineer **2007-2008**

Omran Asr Sepid Consulting Engineers, Iran.

- Completed traffic impacts analysis of more than 50 roads and transit services to assess potential improvements.
- Produced geometric designs of more than 10 arterial roads and intersections.
- Prepared engineering related calculations, and developed drawings, visual aids and spatial data sets.
- Conducted and coordinated traffic data collection, including traffic counts, travel times, delay studies, topographic surveys, and field data collection to establish baselines, elevations, and other geometric measurements.

PROFESSIONAL WORKSHOPS

- Career Professionalism, Dalhousie University. **2016**
- Control Project Management, Iran University of Science and Technology. **2009**

AWARDS / HONORS

- Nova Scotia Research and Innovation Graduate Scholarship, Government of Nova Scotia. **2016-2018**
- Excellence in Performance Award, Dalhousie University. **2014-2018**
- Silver Medal for the Bus Scheduling Model (BSM) System, the 62nd World Exhibition on Invention, Research and New Technology, Belgium. **2013**

VOLUNTEER EXPERIENCES

Vice President, Dalhousie Association of Graduate Students. **2015-16**
Member at Large of Accessibility Committee, Dalhousie Student Union. **2014-15**
Organizing Committee, the Canadian Society for Civil Engineering **(CSCE)**, Halifax. **2014**
Volunteer Teaching of AutoCAD and Civil 3D/Land Desktop, The National University of Malaysia. **2012**

SOCIETY MEMBERSHIPS

American Society of Civil Engineering **(ASCE)**. **2018-Present**
Canadian Institute of Transportation Engineers **(CITE)**. **2014-Present**
Canadian Transportation Research Forum **(CTRF)**. **2014-Present**

SELECTED PUBLICATIONS

Hafezi, H., Daisy, N., Millward, H. Liu, L., 2018. Commuting to Campus: Findings from the Dalhousie EnACT Travel Survey *(Dalhousie)*. **Planning Report**

Hafezi, H., Liu, L., Millward, H. 2018. Modeling Activity Scheduling Behavior of Travelers for Travel Demand Forecasting Models (*2018 TRB Conference*). **Journal Article**

Daisy, N., **Hafezi, H.**, Millward, H. Liu, L., 2018. Understanding and Modeling the Activity-Travel Behavior of University Commuters *(Journal of Urban Planning and Development)*. **Journal Article**

Hafezi, H., Liu, L., Millward, H. 2018. A Time-Use Activity-Pattern Recognition Model for Activity-Based Travel Demand Modeling *(Transportation)*. **Journal Article**

Liu, L., **Hafezi, H.**, Daisy, N., 2016. Results of the 2016 Dalhousie Environmentally Aware Travel Diary (EnACT) Survey. **Planning Report**