Maria Vetrici



Education

3rd Year, BASc in Civil Engineering + PEY, Computer Science Minor

Grad. May 2027

University of Toronto

Courses: Hydrology (ArcGIS Pro, QGIS), Building Science, Graphics (AutoCAD, SketchUp), Construction (Revit), Survey Camp (surveying and mapping), Computer Science (Python, OOP), Software Architecture (Java)

Awards

ESCH Foundation Scholarship, *Transportation Association of Canada (Toronto Chapter)*

Jun 2024

- Supports transportation-related post-secondary studies based on student's goals

Undergrad Award, Natural Sciences and Engineering Research Council of Canada

Apr 2024

Awarded to undergraduate students to foster research and encourage future graduate studies

University of Toronto Excellence Award, University of Toronto

Apr 2023

Awarded to undergraduate students to encourage the pursuit of research

Work Experience

Transport Modelling Research Student

Apr 2024 - Aug 2024

Transportation Modelling Group (TMG), University of Toronto

- Analysed and visualized trends in Toronto's BikeShare data with Python, R and ArcGIS models
- Integrated bike lanes into Toronto's virtual transportation network using OpenPaths Emme
- Designed an algorithm using INRO to model attributes of Toronto's virtual transportation network
- Created a proposal for bike integration in the GTAModel (Toronto's transportation model)

Demand Modelling Research Student

Apr 2023 - Aug 2023

Travel Demand Modelling Group, University of Toronto

- Developed logistic regression models to predict adoption of ride-sourcing services like Uber using survey data and validated findings with statistical techniques using R
- Wrote and presented a 7,000-word paper to predict the adoption of ride-hailing services like Uber (as primary author (in collaboration with two PhD students), at the *TRB Conference* in Washington, DC

Experience

VP Marketing, Women in Science and Engineering (WISE UofT)

Sept 2021 - Present

- Leading a team of 18 marketing team members, with bi-weekly team meetings and weekly 1-1s
- Guiding these members to manage WISE's social media, visual presence, article publication, website, LinkedIn, monthly newsletter, Discord, merchandising and in-person advertising

Marketing Lead, Canadian Society of Civil Engineers (UofT Chapter)

Nov 2023 - Present

- Leading a team of 4 members, and run the social media, graphic design, and website
- Moderating CSCE events and initiatives (panels, Q&A sessions, etc.)

Student Success Ambassador, Civil Engineering Club

Sept 2024 - Present

- Led a midterm review session for a first-year engineering math course for 200+ students
- Explained limits, derivatives, etc. using the blackboard and answered questions

Projects

Hack the 6ity Hackathon, hosted by NSBE Hacks

Feb 26-27 2024

- Developed an interactive map using ArcGIS plugins to visualize trends in rental costs and neighborhood sociodemographics, using Python to combine open-source and scraped rental data

TimberFever Design Competition, hosted by Moses Structural Engineers, Inc.

Sept 21-24 2023

- Designed and built an accessible, full-scale timber bus shelter for students by applying structural engineering design principles and woodworking skills

Skills & Certifications

- English, French, Adobe Suite, Microsoft Office
- First Aid & CPR, SafeTALK (suicide prevention), crisis & conflict management