Marjan Naghshbandi

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EDUCATION

M.A.Sc **Mechanical and Industrial Engineering, University of Toronto**
September 2024 to August 2026
Collaborative Specialization in Psychology, Psychiatry and Engineering

B.A.Sc **Industrial Engineering, University of Toronto** 3.94 cGPA on a 4.00 scale
September 2019 to May 2024
Certificates in 1. Artificial Intelligence & 2. Engineering Business
Thesis: Social Capital and Persistence in Computer Science of Google's Computer Science Summer Institute (CSSI) Students, supervised by Dr. Alison Olechowski
Capstone Project: The Mining Operations Simulation Tool (MOST), supervised by Dr. Janet Lam

PUBLICATIONS

Peer-Reviewed Conference Proceedings

Submitted **Naghshbandi, M.**, Ferguson, S., Olechowski, A. "Something in the air... something about being in-person that makes it easier": Investigating Hybrid Design Teams' Perceptions of Psychological Safety and How It Differs on Slack. *Submitted to the ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*, 2025.

2024 **Naghshbandi, M.**, Ferguson, S., Olechowski, A. Social Capital and Persistence in Computer Science of Google's Computer Science Summer Institute (CSSI) Students. *The American Society for Engineering Education Conference (ASEE)*, 2024.

Works in Progress

Progress **Naghshbandi, M.**, Ferguson, S., Olechowski, A. Automated Uncertainty Management with New Product Development Teams' Enterprise Communication Platforms. *In preparation for the 32nd International Product Development Management Conference (IPDMC)*, 2025.

AFFILIATIONS

2024-25 **Massey College Junior Fellowship** University of Toronto.

TALKS

Conference Presentations Without Proceedings

2024 **M. Naghshbandi**, S. Ferguson, A. Olechowski "Automated Uncertainty Management in New Product Development with Enterprise Communication Platforms" Massey College Ursula Franklin Forum: History and Aspirations for Science and Engineering, November 2024. **Awarded an honorable mention.**
M. Naghshbandi, S. Ferguson, A. Olechowski "The Other Side to Leadership: Using Design Teams' Instant-Messaging Data to Study Leadership Styles on Enterprise Communication Platforms" Canadian Design Workshop 3 (CDW3), December 2024.

2022 **M. Naghshbandi**, V. Sarhangian "Automated Appointment Scheduling for Radiation Therapy Treatment" University of Toronto's Undergraduate Engineering Research Conference, August 2022.

PROFESSIONAL EXPERIENCE

2022-23   **Program Manager**, Intel Corporation *12 months*
Led the Open FPGA Stack (OFS) program to an on-time execution of its first open-source release, including planning, engineering, & marketing activities across > 50 internal & international stakeholders. Enhanced the planning process of the Intel FPGA AI Suite program to include new milestones that formalize objectives for product functionality & usability. Coordinated sub-component deliveries between > 5 international engineering teams by recording, communicating, & tracking dependencies & escalating risks to ensure a minimum 2-week notice of schedule slips.

2022   **Summer Research Intern**, Applied Stochastic & Statistical Modelling Lab *4 months*
Supervisor: Dr. Vahid Sarhangian
Investigated characteristics of scheduling algorithms that minimize patient waiting times for Radiation Therapy treatments using reinforcement learning algorithms. Authored a high-fidelity Python script to evaluate scheduling algorithms against unique radiation therapy treatment plans. Packaged the minimum viable product with documentation & led knowledge transfer sessions to facilitate the project's handover.

2021   **Junior Software Developer**, Hatch Ltd. *4 months*
Engineered a Durable Azure Function that automated the organized transfer of >12,000 project documents. Designed SQL tables & views to store hierarchical & historical records of project data. Redesigned an internal website to automate the documentation of budgeting information & improved user satisfaction by 95%.

GRANTS AND AWARDS

2024   **NSERC Canada Graduate Scholarship - Michael Smith Foreign Study Supplement** *$6,000*
For an upcoming visiting studentship at Carnegie Mellon University with Dr. Chris McComb—Director of CMU's Human-AI Design Initiative.
NSERC Canada Graduate Scholarship - Master's *$17,500*
For academic excellence, research potential, and interpersonal skills as a Master's level candidate.
Queen Elizabeth II Graduate Scholarship in Science and Technology *$15,000 (Declined)*
For academic excellence as a graduate studies candidate in science and technology.
Excellence Award in Natural Sciences and Engineering (UTEA-NSE) *$7,500*
For academic excellence and the quality of the proposed undergraduate summer research project.
W.S. Wilson Medal in Industrial Engineering
For achieving the highest academic standing in the final year of Industrial Engineering.

2023   **William Ian Mackenzie Turner Scholarship In Industrial Engineering** *$16,000*
For ranking first place on the results of Industrial Engineering's third-year examinations.

2022   **Excellence Award in Natural Sciences and Engineering (UTEA-NSE)** *$7,500*
For academic excellence and the quality of the proposed undergraduate summer research project.

       Nicole & Michael Martin Engineering Scholarship *$4,300*
For academic excellence and demonstrated financial need.

       Ben Bernholtz Memorial Prize in Operational Research *$1,500*
For achieving the highest aggregate mark in Operational Research I and II.

       Engineering Society Award *$4,700*
For academic excellence, extra-curricular involvement, and demonstrated financial need.

2021   **Wallace G. Chalmers Engineering Design Scholarship** *$1,000*
For academic achievement in engineering design-intensive courses.

       Wallberg Undergraduate Scholarship *$1,500*
For academic excellence.

2019   **Dean's Merit Award** *$2,500*
For academic excellence.

GRANTS AND AWARDS (continued)

University Of Toronto Scholar *$7,500*
For academic excellence.

Governor General's Academic Medal *$200*
For achieving the highest academic standing (99.2%) among the graduating class.

Academic Achievement Award x8
For achieving the highest academic standing in University-track English, French, Physics, Chemistry, Biology, Calculus, Data Management, and Advanced Functions.

SERVICE

Outreach Activities

2024   **Communications Coordinator** *Graduate Society of Women Engineers, University of Toronto.* Designing social media posts weekly & engaging with students over Instagram & LinkedIn to promote GradSWE events. Building relationships with other on-campus organizations to coordinate joint social media marketing efforts.
Social Chair *Ready Lab, University of Toronto.* Organizing monthly socials to encourage team-bonding & social well-being. Maintaining a $1000/term budget.
Research Assistant *Hack the North 2024 at the University of Waterloo.* Operated professional audio equipment to live record one team's conflict behaviors over the 36-hour event. Documented observational notes on team dynamics, focusing on conflicts that arose during collaboration.

2023-24   **Digital Launchpad Associate** *You're Next Career Network, University of Toronto.* Serving as a User Experience (UX) expert, I inform the design of user-oriented tools that support students in pursuing professional development opportunities. During Fall 2023, I designed the user interface of the YNCN Fall Career Fair Map. The map was used by more than 1,950 students at the fair.

2023   **Director of Marketing & Promotions** *Undergraduate Research Conference, University of Toronto.* Designed social media posts & engaged with students over Instagram & LinkedIn to grow our following by 130% & encourage students to present their summer research projects at the conference. We saw the largest turnout in all 16 years of the event, with >80 podium & >60 poster presentations from undergraduate students.

2022-23   **Orientation Leader** *Engineering Frosh Week.* Led a group of 50 first-year students to provide an enjoyable & safe orientation experience. Organized games, tours, & information sessions. Collaborated with 20 co-leads in educating new volunteers on safe & inclusive practices.

2022   **Visiting Speaker** *Pine Ridge Secondary School.* Presented about my experience as an engineering student to 30 grade 11-12 high school students. Answered the students' questions about university life & how to best prepare for the transition. Topics included first-year tips, an overview of Industrial Engineering, extra-curriculars, & work & research opportunities.

2021-23   **Director of Academics** *Undergraduate Industrial Engineering Club, University of Toronto.* Acted as the liaison between students, faculty, & student government members, as I communicated academic concerns & updates concerning undergraduate Industrial Engineering. Initiated a social media campaign where I interviewed upper-year co-op students & summarized their guidance with infographics. Hosted panels during course selection periods to inform students about procedures & course options.

2021-22   **Guided Academic Review Sessions (GEARS) Mentor** *Engineering Outreach Office, University of Toronto.* Provided first-year students with curriculum support via weekly drop-in & exam prep sessions over Zoom. Also advised students on non-academic matters, such as professional development, time management, & extra-curricular involvement.

SERVICE (continued)

	Staff Writer & Editor for the Space Policy Division *Aerospace Team, University of Toronto*. Authored & edited articles for this student-run publication. Topics included the procedural aspects of commercial space launches in the United States & the impact of Canadian-centered advancements in medicine that were catalyzed by space exploration efforts.
2020-23	**Industrial Engineering Student Mentor** *Undergraduate Industrial Engineering Club, University of Toronto*. Mentored four first-year Industrial Engineering students. Provided academic & professional guidance, including support with first-year courses & preparation for internships.
2020-21	**Content Lead of Cyber Ethics & Digital Rights Portfolio** *Engineers Without Borders, University of Toronto*. Researched technosocial issues, including biometrics, facial recognition, & robotics in healthcare, to modernize & steer the priorities of the portfolio. Curated virtual monthly learning sessions for the University of Toronto community. The sessions educated 30 students/month about current & critical cyber- ethics issues.
	Director of Finance *Skule Community Outreach, University of Toronto*. Managed the $5,000 budget for fundraising initiatives. Oversaw ticket sales, reimbursements, & purchases of event materials. Notable initiatives included the Movember campaign & holiday charity drives.
2020	**Global Engineering Challenge Program Instructor** *Engineering Outreach Office, University of Toronto*. Led workshops for >50 high school students on engineering design, stakeholder analysis, visual prototyping, & UX/UI design as they created prototypes for mental health apps. Encouraged students' progress with creative assessment materials & descriptive feedback. Organized a session about the transition to university studies. Topics included time management & studying, professional development, & on-campus resources & opportunities for involvement.

Peer-Reviewing

2024	ACM Conference on Computer-Supported Cooperative Work and Social Computing.
	ACM CHI Conference on Human Factors in Computing Systems.

CERTIFICATIONS

2024	**Introduction to Gender-based Analysis**+ under the requirements set by the Department of Women and Gender Equality Canada.
2023	**Social & Behavioral Research Investigator for Human Research** under the requirements set by Massachusetts Institute of Technology Affiliates.
	Course on Research Ethics based on the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans under the requirements set by Canada's Panel on Research Ethics.

SKILLS

Computer Programming	Python (Pandas, PyTorch, NumPy, Scikit-learn, SimPy), Java, R, SQL, AMPL, C
Technical Tools	Git, Minitab, Simio, LaTeX, Eclipse, Visual Studio Code

RESEARCH INTERESTS

Human-Computer Interaction, Engineering Design, User Experience Design, AI Surveillance, Gender, Diversity, and Persistence in Computer Science & Engineering, New Product Development (NPD)