# Romina Mahinpei

rmahinpei@princeton.edu rmahinpei.github.io rmahinpei rmahinpei

## EDUCATION

**M.S.E. in Computer Science** **08/2024 – Present**
Princeton University GPA: 4.0 / 4.0
- **Research interests**: AI in education, human-centered AI, social computing, computational social science

**B.Sc. in Honours Computer Science with a Mathematics Minor** **09/2020 – 04/2024**
The University of British Columbia (UBC) GPA: 4.0 / 4.0

## PUBLICATIONS

### *Research Papers*

1. Irix Xu*, **Romina Mahinpei***, Steven Wolfman, and Firas Moosvi. 2026. P*erformance and Start-Time Trends in Asynchronous Computer-Based Assessments*. [Paper]. In Proceedings of the 57th ACM Technical Symposium on Computer Science Education, Volume 2 (SIGCSE TS 2026). DOI: To Appear.

2. **Romina Mahinpei**, Manoel Horta Ribeiro, Mae Milano. 2025. *Interactive Theorem Provers for Proof Education*. [Paper]. In Proceedings of the 2025 ACM SIGPLAN International Symposium on SPLASH-E (SPLASH-E '25). DOI: 10.1145/3758317.3759679.

3. Ivan Orozco Vasquez*, **Romina Mahinpei***, Noureddine Elouazizi, Cristina Conati. 2025. *An Emergent Bottom-Up Categorization of Students' LLMs Usage in an Undergraduate Research Course*. [Paper]. Artificial Intelligence in Education (AIED 2025). Lecture Notes in Computer Science, Volume 15881. DOI: 10.1007/978-3-031-98462-4_17.

4. **Romina Mahinpei***, Iris Xu*, Steven Wolfman, and Firas Moosvi. 2025. *A Generalized Framework for Describing Question Randomization*. [Paper]. In Proceedings of the 2025 ACM Conference on International Computing Education, Volume 1 (ICER 2025). DOI: 10.1145/3702652.3744222.

5. **Romina Mahinpei**, Chen Greif. 2024. *Mixed Precision MINRES*. [Paper]. SIAM Undergraduate Research Online, Volume 17 (SIURO). Society for Industrial and Applied Mathematics. DOI: 10.1137/24s1678489.

### *Workshop Papers & Posters*

1. **Romina Mahinpei**, Sofiia Druchyna, Xinran Bi. 2026. *CNPE: A Framework for Challenges and Needs in Proof Education*. [Poster]. In Proceedings of the 57th ACM Technical Symposium on Computer Science Education, Volume 2 (SIGCSE TS 2026). DOI: To Appear.

2. Anha Khan, **Romina Mahinpei**, Maryam Hedayati, Victoria Dean and Ruth Fong. 2026. *Characterizing the Relationship Between Generative AI, Student Behavior, and Learning Outcomes in Upper-Level CS Education: A Case Study in an Undergraduate Machine Learning Course*. [Poster]. In Proceedings of the 57th ACM Technical Symposium on Computer Science Education, Volume 2 (SIGCSE TS 2026). DOI: To Appear.

3. Adam Craig Pocock, Joseph Wonsil, **Romina Mahinpei**, Jack Sullivan, Margo Seltzer. 2025. *Provenance Design and Evolution in a Production ML Library*. [Workshop Paper]. Championing Open-source DEvelopment in ML Workshop @ ICML25 (CODEML @ICML 2025). OpenReview: https://openreview.net/forum?id=VrbDf3UDgv.

4. **Romina Mahinpei***, Iris Xu*, Steven Wolfman, and Firas Moosvi. 2024. *A Generalized Framework for Describing Question Randomization*. [Poster]. In Proceedings of the 55th ACM Technical Symposium on Computer Science Education, Volume 2 (SIGCSE TS 2024). DOI: 10.1145/3626253.3635599.

## AWARDS

**McGraw Center for Teaching & Learning Fellowship | Princeton University** **2024**
- Awarded for the 2024-2025 academic year to support the research, design, and development of Princeton University's STEM pedagogical resources.

**Academic Award of Excellence | Department of Computer Science, UBC** **2024**
- Awarded to the student with the highest graduating average of the B.Sc. in Honours Computer Science.

**Markus Meister Memorial Prize | Department of Computer Science, UBC** **2024**
- Awarded to the graduating student with the highest standing in the final year of the B.Sc. in Computer Science.

**Trek Excellence Scholarship for Continuing Students | UBC** **2021-2023**
- Awarded yearly to domestic undergraduate students in the top 5% of their year, faculty, and school.

**Schulich Leader Scholarship | The Schulich Foundation** **2020**
- Selected as one of 100 Canadian high school seniors nationwide to receive a four-year, full-tuition STEM scholarship recognizing academic excellence, leadership potential, and community involvement.

## RESEARCH EXPERIENCE

**Humans & Machines Lab | Dr. Manoel Horta Ribeiro | Princeton University** **01/2025 – Present**
- Studying the potential of large language models (LLMs) as companions to teaching assistants for grading and feedback provision tasks in theoretical, proof-based courses through a randomized controlled trial.
- Studying the long-term influence of YouTube's recommendation algorithm on public perceptions of veganism through a long-term online survey.

**Human-AI Interaction Lab | Dr. Cristina Conati | UBC** **01/2024 – 08/2025**
- Studied students' self-reported AI usage patterns in an undergraduate research course and developed a categorization of students' AI usage patterns.
- Evaluated six collaborative filtering models for predicting student performance on questions not yet seen by the student, selecting questions with low predicted scores to generate personalized practice sets.

**Scientific Computing Lab | Dr. Chen Greif | UBC** **05/2023 – 05/2024**
- Studied the potential of mixed precision arithmetic as an efficient preconditioning strategy for solving saddle-point linear systems using the Minimal Residual (MINRES) method while maintaining accuracy.
- Proposed, implemented, and compared the speed-up of two mixed precision variants of MINRES in CUDA C across a range of saddle-point linear systems arising from fluid dynamics.

**Systopia Lab | Dr. Margo Seltzer | UBC** **01/2022 – 01/2023**
- Studied the current state of data workflows across users from academia and industry through a user study and identified ways in which data provenance could simplify those workflows.
- Designed, implemented, and tested the Model Card package for Tribuo, Oracle's open-source Java ML library, to allow Tribuo users to create partially automated machine learning model documentation.

## TEACHING EXPERIENCE

**Introductory Machine Learning | Princeton University** **09/2024 – Present**
- Assisting students in COS 324, Princeton's introductory machine learning course.
- Hosting one-hour-long office hours once a week, holding one-hour-long tutorials once a week, creating exam questions, and completing administrative tasks as the course's head teaching assistant.

**Operating Systems | UBC** **09/2023 – 04/2024**
- Assisted students in CPSC 313, UBC's computer hardware and operating systems course.
- Hosted one-hour-long office hours once a week, held one-hour-long tutorials once a week, managed the team of teaching assistants responsible for creating randomized assessment questions using the PrairieLearn system.

**Software Engineering | UBC** **09/2022 – 04/2023**
- Assisted students in CPSC 210, UBC's software construction and development course.
- Hosted one-hour-long office hours once a week, held two-hour-long labs twice a week, and graded exams.

**Differential & Integral Calculus | UBC** **09/2021 – 04/2022**

- Assisted students in differential and integral calculus in Science One, an immersive program emphasizing the integration of different scientific disciplines and ranking as UBC's highest level of first-year science.
- Hosted one-hour-long office hours twice a week, held exam review sessions, and graded exams.

## WORK EXPERIENCE

**Software Engineering Intern | Microsoft** **06/2025 – 08/2025**

- Interned as a software engineer for one of Xbox's **AI engineering** teams.
- Implemented a context-aware chat participant for the Visual Studio Code Copilot to assist developers in partner teams with using our libraries integrating data experimentation features into their codebases.

**Software Engineering Intern | Microsoft** **06/2024 – 08/2024**

- Interned as a software engineer for one of Xbox's **data experimentation** teams.
- Implemented new Semantic Kernel plugins for the team's Copilot, defined metrics to evaluate the success of the plugins, and created a Power BI report to summarize and visualize the defined metrics.

**Software Engineering Intern | Microsoft** **06/2023 – 08/2023**

- Interned as a software engineer for one of Xbox's **data engineering** teams.
- Defined metrics to track the availability of core streams and implemented the pipelines and a Power BI report to summarize and visualize the defined metrics.

**Software Engineering Intern | Microsoft** **06/2022 – 08/2022**

- Interned as a software engineer for one of Xbox's **services and operations** teams.
- Defined and implemented a new feature to personalize users' gaming experiences.