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EDUCATIONS

Ph.D. in Computer Science

Sep. 2024 - Present

University of Toronto

Advisor: Prof. Michael Liut, Prof. Carolina Nobre

Research Area: Human-Computer Interaction, Human-AI Interaction, Intelligent System, Computer Science Education, Educational Technology

B.Sc. in Computer Science

Sep. 2019 - Jun. 2024

University of Toronto

2023 University of Toronto Undergraduate Student Research Award (USRA)

CRA Outstanding Undergraduate Researcher Awards 2023 Honorable Mention

Dean's List Scholar in '20-'21, '21-'22, '22-'23

PUBLICATIONS

6. **Ye, R.**, Sibia, N., Zavaleta Bernuy, A., Zhu, T., Nobre, C., & Liut, M. (2024, October). [ARC: an Automated Review Companion Leveraging User-Centered Design for Research Integration](#). *In submission, preprint available on OSF*.³
5. Zavaleta Bernuy, A., Sibia, N., Chen, P., Xu, J. J.-N., Tran, E., **Ye, R.**, Pammer-Schindler, V., Petersen, A., Williams, J. J., & Liut, M. (2024, May). [Does the Medium Matter? A Comparative Analysis of Voice and Text Reflective Learning](#). In *Proceedings of the 2024 ACM Designing Interactive Systems Conference (DIS '24)*.
4. Kazemitabaar, M., **Ye, R.**, Wang, X., Henley, A., Denny, P., Craig, M., & Grossman, T. (2024, May). [CodeAid: Evaluating a Classroom Deployment of an LLM-based Programming Assistant that Balances Student and Educator Needs](#). In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI '24)*.²
3. Zavaleta Bernuy, A., **Ye, R.**, Sibia, N., Nalluri, R., Williams, J. J., Petersen, A., Smith, E., Simion, B., & Liut, M. (2024, March). [Student Interaction with Instructor Emails in Introductory and Upper-Year Computing Courses](#). In *Proceedings of the 55th ACM Technical Symposium on Computer Science Education (SIGCSE '24)*.¹
2. Zavaleta Bernuy, A., **Ye, R.**, Tran, E., Mandal, A., Shaikh, H., Simion, B., Petersen, A., Liut, M., & Williams, J. J. (2023, November). [Do Students Read Instructor Emails? A Case Study of Intervention Email Open Rates](#). In *Proceedings of the 23rd Koli Calling International Conference on Computing Education Research (Koli Calling '23)*.¹
1. **Ye, R.**, Chen, P., Mao, Y., Wang-Lin, A., Shaikh, H., Zavaleta Bernuy, A., & Williams, J. J. (2022, September). [Behavioral Consequences of Reminder Emails on Students' Academic Performance: a Real-world Deployment](#). In *Proceedings of the 23rd Annual Conference on Information Technology Education (SIGITE '22)*. Received the **Best Paper Award** 🏆¹

RESEARCH PROJECTS

3. **Design, Implementation, and Evaluation of a Novice Systematic Review Assistant** Sep. 2023 - Present
Dynamics Graphics Project (DGP) Lab, University of Toronto Toronto, ON
 - Developed ARC, an open-source tool to automate systematic literature reviews (SLRs), reducing researcher workload and enhancing transparency and reproducibility.
 - Conducted interviews with 20 researchers globally to iteratively refine ARC based on user feedback, improving usability and workflow integration.
 - Integrated multiple scholarly databases (e.g., DBLP, Web of Science) and automated forward/backward reference tracking for comprehensive literature searches.

2. **Design and Evaluation of New Programming Tools using AI Coding Assistants** Jan. 2023 - Dec. 2023
Dynamics Graphics Project (DGP) Lab, University of Toronto Toronto, ON
 - Monitored an LLM-based implementation that was fine-tuned and deployed for a second-year university course of size 700. Carefully tracking usage patterns and identifying areas for improvement.
 - Created thematic analysis codebook and specialized classification tags to better evaluate students' interaction with the tool and the tool's responses.
 - Performed quantitative and qualitative data analysis on students' tool usage, over 8,000 student interactions with the tool, over 1,000 survey responses, and additional interview notes.

1. **Impact of Reminder Emails Using Randomized A/B Comparisons** Aug. 2020 - Dec. 2023
Intelligent Adaptive Interventions (IAI) Lab, University of Toronto Toronto, ON
 - Improved the design of personalized A/B interventions to encourage students to start early. Successfully deployed these interventions to thousands of university students, within over 5 different courses, among 2 university campuses, across multiple semesters.
 - Quantitatively analyzed various factors and derived meaningful, statistically significant results on how reminder messages impact student behavior and performance.
 - Created interview guide and conducted interviews with ~15 students per semester to collect qualitative feedback on the reminder messages. Employed feedback to improve future interventions iteratively.

WORK EXPERIENCES

- Full-Stack Software Developer Intern** May 2022 - May 2023
Advertising and Customer Experience (CX), Oracle Toronto, ON
- Maintained and updated dependencies and documentation for 20+ distinct projects and apps.
 - Migrated and re-implemented core functions of the application to the Kubernetes cluster, leading to improved scalability, reliability, and cost savings for the application.
 - Developed 2+ complex end-to-end API automation test cases in Java, handling asynchronous operations between multiple applications, resulting in a reduction of manual testing and increased testing efficiency.
 - Contributed to the rewrite of a legacy web application, created 3 pages using React and OJET components, leading to improved user experience and modernization of the application.
 - Created and implemented 20+ end-to-end browser automation test cases in Selenium WebDriver and C#, including related infrastructure. Ensuring maximum testing reliability and resulting in enhanced testing coverage and efficiency.

- Undergraduate Research Assistant** Aug. 2020 - Jun. 2024
Dynamics Graphics Project (DGP) Lab, University of Toronto Toronto, ON
- Contributed extensively to multiple research projects under different research groups, supporting adaptive experiments, field deployments, data collection and analysis, leading to numerous meaningful publications.

TEACHING EXPERIENCES

- Teaching Assistant** Sep. 2021 - Present
University of Toronto Toronto, ON
- Introduction to Computer Programming** - CSC108 (Fall '21, Fall '23: Head TA)
- Software Design** - CSC207 (Fall '24)
- Introduction to Databases** - CSC343 (Winter '23, Winter '24: Head TA)
- CSC108: Host breakout rooms to teach course exercises in an active learning environment.
 - CSC207: Host weekly tutorial sessions to engage students with course content and supervise final course projects.
 - CSC343: Support instructor to develop and revamp course, including overall course structure, pre-lecture videos, lectures, tutorials, assignments, and exams. Preparing and delivering weekly tutorials, monitoring and answering student questions on online forums, and grading students' assignments and exams.

- Head TA includes additional duties such as preparing course materials, coordinating groups of TAs, and additional admin tasks.

TALKS

1. **The 23rd Annual Conference on Information Technology Education (SIGITE '22)** Sep. 2022
Paper Presentation *Chicago, IL (Virtual)*
 - Title: [Behavioral Consequences of Reminder Emails on Students' Academic Performance: a Real-world Deployment](#)

SERVICES

Conference Volunteers

SIGCSE '23

TECHNICAL STRENGTHS

Computer Languages

Python, Java, R, JavaScript, SQL, HTML, Bash, C#

Scientific Libraries

Pandas, NumPy, SciPy, Matplotlib

Technologies/Frameworks/Databases

Django, React, React Native, PostgreSQL, Selenium WebDriver

Cloud/Developer Tool

Azure, AWS, Docker, Git, Postman