RUNLONG (HARRY) YE

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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, Educational Technology

B.Sc. in Computer Science Sep. 2019 - Jun. 2024
University of Toronto

PUBLICATIONS

9. **Ye, R.**, Lee, P. Y. K., Varona, M., Huang, O., & Nobre, C. (2025, June). ScholarMate: A Mixed-Initiative Tool for Qualitative Knowledge Work and Information Sensemaking. In *Proceedings of the 4th Symposium on Human-Computer Interaction for Work (CHIWORK '25)* [3]

8. Xiao, R., **Ye, R.**, Hou, X., Kazemitabaar, M., Diana, N., Liut, M., & Stamper, J. (2025, March). Improving Student-LLM Interactions through Pedagogical Prompting. *Preprint*. Under Review.

7. **Ye, R.**, Varona, M., Huang, O., Lee, P. Y. K., Liut, M., & Nobre, C. (2025, February). The Design Space of Recent AI-assisted Research Tools for Ideation, Sensemaking, and Scientific Creativity. *Preprint*. Under Review. [3]

6. **Ye, R.**, Sibia, N., Zavaleta Bernuy, A., Zhu, T., Nobre, C., & Liut, M. (2024, October). ARC: Automated Review Companion Leveraging User-Centered Design for Systematic Literature Reviews. *Preprint*. Under Review. [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)*. **Best Paper Award** 🏆 [1]

RESEARCH PROJECTS

3. **AI-Assisted Research Tools for Ideation, Sensemaking, and Scientific Creativity** Feb. 2024 - Present
Dynamics Graphics Project (DGP) Lab, University of Toronto *Toronto, ON*

Investigated the broader landscape of AI-powered research tools, focusing on enhancing human cognitive engagement and creativity in academic research. Conducted literature review across diverse AI-assisted platforms to uncover critical design dimensions that shape researchers' interactions and decision—making processes, including user agency and control, divergent and convergent thinking, adaptability, and accuracy. Moreover, developed ARC, an open-source platform for automated systematic literature reviews, integrating iterative feedback from global user studies to refine features such as Keyword Variation Management, Iterative Search Comparison, and LLM-powered Irrelevance Filtering. This user-centered approach reduced researcher workload, fostered reproducibility, and advanced transparent research practices.

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*

Part of CODEAID project, an LLM-based programming assistant for a 700-student course, collecting and analyzing over 8,000 student interactions, 1,000+ survey responses, and additional interview data. I led the development of a thematic analysis codebook with specialized classification tags and performed both qualitative and quantitative analyses. These findings informed critical design recommendations for future AI-powered educational tools.

1. **Impact of Reminder Emails Using Randomized A/B Comparisons** Aug. 2020 - Dec. 2023
Intelligent Adaptive Interventions (IAI) Lab, University of Toronto *Toronto, ON*

Co-developed a series of randomized A/B experiments for encouraging better student learning behaviors. I co-designed and deployed personalized A/B interventions for thousands of students across multiple courses and university campuses. I engage in both quantitative analyses (deriving significant statistical insights on how reminder messages impact behavior) and qualitative investigations (developing interview guides and conducting interviews with ∼15 students each semester). My findings directly informed iterative improvements to projects's intervention strategies and messaging.

WORK EXPERIENCES

Full-Stack Software Developer Co-op May 2022 - May 2023
CX, Oracle *Toronto, ON*

- Maintained 20+ projects, updating dependencies and documentation. Modernized a legacy web app by creating new pages with React and OJET, enhancing user experience.
- Migrated core application functions to Kubernetes, boosting scalability, reliability, and reducing costs.
- Developed 20+ end-to-end automation tests (Java, Selenium WebDriver, C#), including asynchronous API tests, significantly increasing test coverage and efficiency.

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)
Computing Education - CSC389 (Winter '25)

- CSC108: Host lecture breakout rooms to teach course exercises in an active learning environment.
- CSC207: Host weekly tutorial sessions to engage students with course content and supervise students' course projects.
- CSC343: Support instructor to update and review course structure, material, and exams. Preparing and delivering weekly tutorials, moderating online discussions, and grading.
- CSC389: Support lecture delivery, develop and deliver weekly tutorial sessions on research methodology.

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

RESEARCH AWARD

DiDi Graduate Student Award in Computer Science ($10,000)	2024-2025
University of Toronto Undergraduate Student Research Award ($7,500)	2023
CRA Outstanding Undergraduate Researcher Awards Honorable Mention	2023

SERVICES

Conference Reviewer

CHI - ACM Conference on Human Factors in Computing Systems
1 ×Late-Breaking Work, 2025
DIS - ACM Designing Interactive Systems Conference
1 ×Full Paper, 2025

Conference Student Volunteer

SIGCSE (2023)

Community Volunteer

DCS Academy (2025)

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