Amna Liaqat

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EMPLOYMENT

2022 – Present	**Postdoctoral Research Fellow** Computer Science	PRINCETON UNIVERSITY, USA

EDUCATION

2018 – 2022   **Ph.D.** Computer Science   UNIVERSITY OF TORONTO, CANADA

Thesis Title: "Digitally Mediated Support for Informal Culture and Language Learning"
Supervisor: Dr. Cosmin Munteanu
Supervisory Committee: Dr. Negin Dahya, Dr. Joseph Jay Williams, Dr. Priyank Chandra, Dr. Celine Latulipe (external)

2016 – 2018   **M.Sc.** Computer Science   UNIVERSITY OF TORONTO, CANADA

Thesis Title: "Design Requirements for a Tool to Support the Writing Development of Mature English Language Learners"
Supervisor: Dr. Cosmin Munteanu
Supervisory Committee: Dr. Mathew Zaleski

2013 – 2016   **Bacherlor's** of Computer Science and Business Joint Major   SIMON FRASER UNIVERSITY, CANADA

FELLOWSHIPS, SCHOLARSHIPS, AND AWARDS

2023 – 2025	Princeton Presidential Postdoctoral Fellowship	$80,000
2022 – 2023	Princeton Center for Information Technology Policy Postdoctoral Fellowship	$70,000
2022 – 2023	NSERC Postdoctoral Fellowship	$45,000
2022	Beatrice Worsley Graduate Scholarship in Computer Science	$4,000
2022	University of Toronto Doctoral Completion Award	$4,000
2021	General Motors Women in Science and Mathematics Award	$4,000
2021	University of Toronto Arts and Science Program Completion Award	$4,000
2021	Wolfond Scholarship Program in Wireless Information Technology	$5,000
2020	Nick Cercone Scholarship for AI Research	$6,000
2020	Ontario Graduate Scholarship	$15,000
2021	Techno Impact Award	$1,500
2019	AGE-WELL Drinks and Demo Award	$5,00
2019	AGE-WELL Summer Institute Hackathon Winner	$1,500
2018	Ontario Graduate Scholarship	$15,000
2017	Ontario Graduate Scholarship	$15,000
2016	Simba Technologies Inc. Scholarship in Computing Science	$2,500
2015	Canadian Federation of University Women Education Award	$1,000
2015	Simba Technologies Inc. Scholarship in Computing Science	$2,500
2015	SFU Undergraduate Open Scholarship	$1,200
2015	Scotiabank Scholarship for the Beedie School of Business	$2,500
2015	SFU Undergraduate Open Scholarship	$900
2013	SFU Entrance Scholarship	$5,000

PUBLICATIONS

FULLY REFEREED CONFERENCE AND JOURNAL PUBLICATIONS

1. **Liaqat, A.**, Liu, F., Berengard, B., Cao, J., & Monroy-Hernández, A. (2025) *Understanding Young People's Creative Goals with Augmented Reality* ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '25).

2. Panigrahi, P., **Liaqat, A.**, Kim, S., Jinturkar, S., Russakovsky, O., Fong, R., & Abtahi, P. (2025) *Exploring Interactive Explainable AI for Computer Vision Systems* ACM Symposium on Intelligent User Interfaces (IUI '25). **Under Review**

3. **Liaqat, A.**, Berengard, B., Hundiwala, D., Cho, Y., Liu, F., & Monroy-Hernández, A. (2024) *Capybara: Enabling Children's Creativity with Augmented Reality Through Drag-and-Drop Coding* ACM Symposium on User Interface Software and Technology (CHI '25). **Under Review**

4. Liu, Y., **Liaqat, A.**, Zhang, X., Espinosa, M., Manjunatha, A., Yang, A., Nanda, V., Papakyriakopoulos, O., & Monroy-Hernández, A. (2024). *Mapping the Landscape of Independent Food Delivery Platforms in the United States.* ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '24)

5. **Liaqat, A.**, Demmans Epp, C., Cai, M., & Munteanu, C. (2023) *Exploring Collaborative Culture Sharing Dynamics in South-Asian Immigrant Families through Digital Crafting and Storytelling* ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '23)

6. Knoll, T., **Liaqat, A.**, & Monroy-Hernández, A. (2023). *ARctic Escape: Promoting Social Connection, Teamwork, and Collaboration Using a Co-Located Augmented Reality Escape Room.* Late Breaking Work at the CHI Conference on Human Factors in Computing Systems (CHI'23)

7. 🏆 Zhang, L., Simion, B., Kaler, M., **Liaqat, A.**, Dick, D., Bergen, A., Miljanovic, M., & Petersen, A. (2023) *Embedding and Scaling Writing Instruction Across First- and Second-Year Computer Science Courses.* The Technical Symposium on Computer Science Education (SIGCSE '23). **Best Paper Award**

8. **Liaqat, A.**, Axtell, B., & Munteanu, C. (2022) *"With a hint she will remember": Collaborative Storytelling and Culture Sharing between Immigrant Grandparents and Grandchildren Via Magic Thing Designs.* ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '22)

9. **Liaqat, A.**, Axtell, B., & Munteanu, C. (2021) *Participatory Design for Intergenerational Culture Exchange in Immigrant Families: How Collaborative Narration and Creation Fosters Democratic Engagement.* ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '21)

10. **Liaqat, A.**, Munteanu, C., & Demmans Epp, C. (2020). *Involving Mature English Language Learners': Design Guidance for Combining Peer and Automated Feedback to Support Writing Development.* International Journal of Artificial Intelligence in Education (IJAIED)

11. 🏆 **Liaqat, A.**, & Munteanu, C (2020). *Leveraging Peer Support for Mature Immigrants Learning to Write in Informal Contexts.* 2020 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '20). ACM, Minneapolis, MN, USA. **Diversity and Inclusion Award**

12. Rakovic, M., Marzouk, Z., **Liaqat, A.**, Winne, P. H., & Nesbit, J. C (2020) *Fine Grained Analysis of Students' Online Discussion Posts.* Computers and Education.

13. **Liaqat, A.**, Akcayir, G., Demmans Epp, C., & Munteanu, C (2019). *Mature ELLs' Perceptions Towards Automated and Peer Writing Feedback.* In: Pammer-Schindler V., Pérez-Sanagustín M., Drachsler H., Elferink R., Scheffel M. (eds) Transforming Learning with Meaningful Technologies. EC-TEL 2019. Lecture Notes in Computer Science, Springer, Cham.

14. 🏆 **Liaqat, A.**, & Munteanu, C. (2018). *Towards a Writing Analytics Framework for Adult English Language Learners.* In Proceedings of the Eight International Conference on Learning Analytics and Knowledge (LAK '18). ACM, Sydney, Australia. **Best Short Paper Nominee**

15. Winne, P. H., Nesbit, J. C., Ram, I., Marzouk, Z., Vytasek, J., Samadi, D., Stewart-Alonso, J. Rakovic, M., **Liaqat, A.**, Lin, M. P-C., Mozaffari, Z., & Savoji, A. P. (2017). *Tracing metacognition by highlighting and tagging to predict recall and transfer.* American Educational Research Association, San Antonio, TX.

16. Marzouk, Z., Rakovic, M., **Liaqat, A.,** Vytasek, J., Samadi, D., Stewart-Alonso, J., Ram, I., Woloshen, S., Winne, P.H. & Nesbit, J.C. (2016). *What if learning analytics were based on learning science?.* Australasian Journal of Educational Technology, 32(6).

Lightly Refereed Workshop Papers and Posters

1. **Liaqat, A.**, & Axtell, B. (2022). *Drawing on Literary Metaphors to Enhance Social Connection in Hybrid Spaces.* CHI 2024 Workshop on Envisioning New Futures of Positive Social Technology: Beyond Paradigms of Fixing, Protecting, and Preventing (CHI '24)

2. Axtell, B., & **Liaqat, A.** (2022). *What Would Jane Austen Do: Opportunities for Intentional Social Norms in Digital Spaces.* CHI 2022 Workshop on Social Presence in Virtual Spaces (CHI '22)

3. **Liaqat, A.** (2021). *Technology Mediated Support for Informal Culture and Language Learning.* University of Toronto Graduate Research Day

4. **Liaqat, A.** (2021). *Intersectional Approaches for Supporting Casual Language and Culture Learning in Immigrant Families.* Doctoral Consortium at the 2021 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '21)

5. **Liaqat, A.**, & Munteanu, C. (2021). *In-the-wild Creative Learning: A Case Study on Culture Sharing in Immigrant Families.* In Companion of the 2021 Conference on Creativity and Cognition (C&C '21). Venice, Italy

6. **Liaqat, A.** (2021). *Intersectional Approaches to Designing Educational Technology for Marginalized Populations.* Consortium for the Science of Sociotechnical Systems (CSST)

7. **Liaqat, A.**, & Munteanu, C. (2021). *Supporting Casual Language and Culture Learning in Immigrant Families through Storytelling.* In Companion of the 2021 Conference on Artificial Intelligence in Education (AIED '21). Utrecht, Netherlands

8. **Liaqat, A.**, & Munteanu, C .(2021). *Hidden Margins: Reflections on Designing with Populations at the Intersection.* In Companion of the 2021 ACM Conference on Human Factors in Computing Systems (CSCW '21). ACM, Yokohama, Japan

9. **Liaqat, A.**, & Munteanu, C. (2019). *Social Learning Frameworks for Analyzing Collaboration with Marginalized Learners.* In Companion of the 2019 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '19). ACM, Houston, TX, USA

10. **Liaqat, A.**, & Munteanu, C. (2019). *Hidden margins: Developing new ways of designing for, and with, older adult immigrants.* In Companion of the 2019 ACM Conference on Human Factors in Computing Systems (CHI '19). ACM, Glasgow, Scotland

11. **Liaqat, A.**, Axtell, B., Munteanu, C., & Demmans Epp, C. (2018). *Contextual Inquiry, Participatory Design, and Learning Analytics: An Example.* Workshop on Participatory Design of Learning Analytics at International Conference on Learning Analytics and Knowledge

12. **Liaqat, A.**, Marzouk, Z., Rakovic, M., & Winne, P. H. (2017). *Interactive Writing Analytics. Workshop on Writing Analytics.* Literacy at International Conference on Learning Analytics and Knowledge

Book Chapters

1. Munteanu, C., Axtell, B., Rafih, H., **Liaqat, A.**, & Aly, Y. (2018). *Designing for Older Adults: Overcoming Barriers to a Supportive, Safe, and Healthy Retirement*

2. Winne, P. H., Vytasek, J. M., Patzak, A., Rakovic, M., Marzouk, Z., Pakdaman-Savoji, A., Ram I, Samadi D, Lin MP, Liu A, & **Liaqat, A.** (2017). *Designs for learning analytics to support information problem solving.* In Informational Environments (pp. 249-272). Springer, Cham

Science Communication

1. Grandparents and Grandchildren Share their Stories in a Digital Tree of Cultural Heritage (2022). Medium Article

2. #HowsMyFlattening: Choosing Ontario's COVID-19 Curve (2020). Medium Article

Grants

2023 – 2024	**Sloan Foundation**	$41,500

Project: "Literary Metaphors as Design Inspiration for Hybrid Spaces: A Jane Austen Pilot Project". Co-PI with Dr. Benett Axtell.

2019 – 2021	**New Frontiers in Research Fund**	$197,000

Project: "Resilience at the crossroads: A techno-feminist approach to intergenerational culture preservation through social storytelling and sense-making within displaced populations"

2020	**Toronto COVID-19 Action Fund**	$50,000

Project: "#HOWSMYFLATTENING: Developing a COVID19 Analytics Hub to monitor Ontario's response to the pandemic"

Teaching

Instructor

2022	CCT480: User Experience Design - Quantitative Methods	One time

Teaching Assistant

2021	MGT270: Data Analytics for Management	One time
2019–2020	CCT485: User Experience Design	Two times
2016 – 2019	CSC300: Computers and Society	Six times
2019–2020	CSC108: Introduction to programming	Three times

Diversity, Equity, and Inclusion Service

2020 – 2022	Society for Canadian Women in Science and Technology (SCWIST)	Steering Committee
2021	Preparation for Research through Immersion, Skills, and Mentorship (PRISM)	Mentor
2021	University of Toronto Women in Computer Science	Mentor
2020 – 2021	University of Toronto Graduate Admissions	Committee Member

Academic Service

Organizing Committee: Student Volunteer Co-Chair

2023	Computer-Supported Cooperative Work and Social Computing (CSCW)
2023	Creativity and Cognition (C&C)

Associate Chair

2025	Human Factors in Computing Systems (CHI) Papers Learning and Families
2023	Human Factors in Computing Systems (CHI) Late Breaking Work
2022	Human Factors in Computing Systems (CHI) Late Breaking Work

Reviewer

2021–Present	Computer-Supported Cooperative Work and Social Computing (CSCW)
2020–Present	Human Factors in Computing Systems (CHI)

2021   Computers and Education

STUDENT VOLUNTEER

2023   Creativity and Cognition (C&C)
2019   Computer-Supported Cooperative Work and Social Computing (CSCW)
2015   International Symposium on Electronic Art (ISEA)

MEDIA

2020   #HowsMyFlattening? Group led by U of T community members creates one-stop shop for
            COVID-19 data | Article
2020   CS faculty and students are key contributors to 'virtual war room' for Ontario COVID-19
            information | Article
2020   We in Ontario are flying blind' How top minds teamed up to give us the COVID-19 data the
            province couldn't | Article