

# Zixin (Nicole) Zhao

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## RESEARCH AREA

Human Computer Interaction (HCI), Information Visualization, Natural Language Processing (NLP), Educational Technology, Language Learning

## EDUCATION

- Started Sep 2023      **Doctor of Philosophy**, Computer Science  
University of Toronto  
Supervisors: Fanny Chevalier and Gerald Penn
- 2023                      **Master of Science**, Computer Science  
Ontario Tech University  
Supervisor: Dr. Christopher Collins  
Thesis: *Gloss Positioning for a Gaze Aware L2 Reading Aid*
- 2021                      **Bachelor of Science**, Electric Engineering major and Computing Science minor  
University of Alberta

## RESEARCH EXPERIENCE

- Sep 2023 to Present      **Graduate Research Assistant**, DGP and CL Lab, University of Toronto  
Supervisor: Fanny Chevalier and Gerald Penn
- Developing writing supports tools
- Sep 2023 to Present      **Research Associate**, vialab, Ontario Tech University  
Supervisor: Christopher Collins
- Gaze intervention methods for reading technologies
  - Organization, transcription, and analysis of study material
- May 2021 to Aug 2023      **Graduate Research Assistant**, vialab, Ontario Tech University  
Supervisor: Christopher Collins
- Analysis on user input data to a mental health chatbot response visualization tool
- Jun 2019 to Apr 2021      **Research Assistant**, EdTeKLA, University of Alberta  
Supervisor: Carrie Demmans Epp
- Full-stack developer for CreeTutor, a web-based language learning system for Plains Cree(y-dialect)
  - Family tree visualizations for Cree kinship learning
  - Released dataset of negative language transfer of ESL students with Chinese L1
- May 2018 to Dec 2018      **Research Assistant**, Machine Intelligence Group, University of Western Australia  
Supervisor: Ajmal Mian
- Approximate apparent age of human faces using rendered 3D faces

## TEACHING EXPERIENCE

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|----------------------|--|
| Sep 2023 to present  | <b>Teaching Assistant</b> , University of Toronto <ul style="list-style-type: none"> <li>CSC 2537 (Graduate Seminar: Information Visualization; Fall 2023 and Winter 2024 sessions)</li> </ul><br><b>Graduate Mentor</b> , University of Toronto <ul style="list-style-type: none"> <li>PRISM: Preparation for Research through Immersion, Skills, and Mentorship</li> </ul> |
| Dec 2021 to Apr 2023 | <b>Teaching Assistant</b> , Ontario Tech University <ul style="list-style-type: none"> <li>CSCI 4160 (Interactive Media Introduction to Unity)</li> <li>CSCI 4210 (Information Visualization)</li> <li>CSCI 4620 (Human Computer Interaction)</li> </ul>   |
| Jan 2018 to Aug 2023 | <b>Tutor</b> , University of Alberta <ul style="list-style-type: none"> <li>High school math and physics (Alberta curriculum)</li> <li>Introductory programming languages (Python, C/C++, MATLAB), first and second year courses in calculus and physics</li> </ul>  |
| May 2017 to Aug 2017 | <b>Summer Instructor</b> , DiscoverE <ul style="list-style-type: none"> <li>Course curriculum development for STEM classes aimed at Grade 9 students in Alberta and the Northwest Territories</li> </ul>   |

## PUBLICATIONS, PEER REVIEWED

- Z. Zhao** (2023) Gloss Positioning for a Gaze Aware L2 Reading Aid. *Master's Thesis*. [\[link\]](#)
- C. Collins, S. Arbour, N. Beals, S. Yama, J. Laffier, **Z. Zhao**. (2022) Covid Connect: Chat-Driven Anonymous Story-Sharing for Peer Support. *DIS '22: Designing Interactive Systems Conference*. 301-318. <https://doi.org/10.1145/3532106.3533545>
- F. L. Wanderly, **N. Zhao**, and D. C. Epp. (2021) Negative language transfer in learner English: A new dataset. *NAACL-HLT*. 3129–3142, <https://doi.org/10.18653/v1/2021.naacl-main.251>

## WORKS IN PROGRESS

- Using Visual Explanations to Guide Data-Driven Student Advising, Long Paper, Submitted to *Graphics Interface (GI) Conference 2024*
- Make it Happier! Discretizing and Amplifying Happiness in Animated Faces, Poster, To be submitted to *ACM SIGGRAPH*

## PRESENTATIONS AND POSTERS

- Z. Zhao** (2022). *Work in Progress: Exploration of glosses for gaze enhanced language learning applications*. 10 min [Conference presentation]. CAN-CWIC, Toronto, ON, Canada.
- O. McLeod, **Z. Zhao**, A. Sparrow, D. Lothian, K. Richards, G. Akcayir, C. Demmans Epp, (2021) *Helping Revitalize Plains Cree with User Centered Design*. ReverseEXPO. [Poster] Edmonton, AB, Canada. [\[link\]](#)

M. Yousef, E. Whitby, **N. Zhao** (2020) *Energy Monitoring System for a Transactive Market*. 15 min [Presentation] IEEE Capstone Scholarship Winners. Edmonton, AB, Canada.

## **AWARDS AND SCHOLARSHIPS**

Mar 26, 2024	Department of Computer Science Graduate Program Award
Nov 11, 2023	Faculty of Arts and Science Program Level Fellowship
Apr 1, 2020	IEEE Capstone Scholarship
Sep 1, 2018	Queen Elizabeth II Scholars (QES) Scholarship
Sep 1, 2015	Canadian Association of Petroleum Producers Academic Excellence Scholarship in Engineering
Sep 1, 2015	Faculty of Engineering Academic Excellence Scholarship

**REFERENCES**      *Available upon request*