human-centered design, video-based learning, AI for education, music technology

### **Education**

#### **University of British Columbia**

Vancouver, BC, Canada

PHD (COMPUTER SCIENCE)

Sep. 2019 - Current

- Supervised by Professor Dongwook Yoon
- · Trainee of Designing for People Research Cluster

### **Harvey Mudd College**

Claremont, CA, USA

Sep. 2015 - May. 2019

B.S. (COMPUTER SCIENCE AND MATHEMATICS)

• Recipient of So International Scholarship for 4 years (from academic year 2015-2016 to academic year 2018-2019.)

## **Selected Projects/Publications**

# Debate Chatbots to Facilitate Critical Thinking on YouTube: Social Identity and Conversational Style Make A Difference

Vancouver, BC, Canada

PUBLISHED: ACM CHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS, CHI 2024 (BEST PAPER AWARD)

September, 2022 - September, 2023

- **Problem:** This paper proposes using large-language model (LLM) to implement a debate partner to mitigate algorithm-induced filter bubble problem in social media and focuses on designing the personas and behaviors of the agent.
- · I conducted literature review, designed and implemented the prototype, and conducted the evaluative study.
- · Supervised by Professor Dongwoon Yoon. (Department of Computer Science, University of British Columbia)

## Scripted Vicarious Dialogues: Educational Video Augmentation Method for Increasing Isolated Students' Engagement

Vancouver, BC, Canada

PUBLISHED: ACM CHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS, CHI 2023

June, 2021 - September, 2022

- **Problem:** This paper proposes embedding scripted interactions of virtual characters into lecture videos to increase the learner's engagement and learning gain via vicarious learning.
- $\bullet \ \ \text{I conducted formative study, derived design guidelines, designed the prototype, and conducted the evaluative study}$
- Supervised by Professor Dongwoon Yoon. (Department of Computer Science, University of British Columbia)

### Using cell phone pictures of sheet music to retrieve MIDI passages

Claremont, CA, USA

Published: IEEE Transactions on Multimedia, Volume: 22, Issue: 12, Dec. 2020.

May, 2018 - Oct, 2018

- Problem: This project aims to synchronize scanned sheet music to a MIDI performance of the same piece, using deep learning.
- I created dataset, implemented the baseline system, and ran experiments to improve the proposed system.
- · Supervised by Professor Timothy Tsai. (Music Information Retrieval Lab, Engineering Department, Harvey Mudd College)

### **AR Music Visualizers: Application Space and Design Guidelines**

Vancouver, BC, Canada

Published (Extended abstract): ACM CHI Conference on Human Factors in Computing Systems, CHI 2022.

Jan. 2021 - Apr. 2021

- **Problem:** This project investigates the applications and potential benefits of augmented-reality (AR) music visualizers and develop guidelines for designing such applications.
- I interviewed expert developers and researchers in the field and performed qualitative analysis to derive the findings.
- Supervised by Professor Dongwoon Yoon. (Department of Computer Science, University of British Columbia)

## Work Experience\_

**Instructor** Vancouver, Canada

DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF BRITISH COLUMBIA

September - December 2023

- Course: CPSC 344 Introduction to HCI Methods (2023 Fall semester)
- I organized class contents, facilitated a student-centered, active learning classroom, and supervised teaching assistants in running workshops.

Teaching Assistant Vancouver, Canada

DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF BRITISH COLUMBIA

January 2021 - May 2023

- Course: Advanced Methods for Human Computer Interaction (2021-2023 Spring semesters)
- · I ran student's workshop activities, supervised student's course projects, and graded student's assignments and exams.

MAY 2, 2024 THITAREE TANPRASERT · RÉSUMÉ