

tongyu zhou

PHD STUDENT · HUMAN-COMPUTER INTERACTION

✉ tongyu_zhou@brown.edu | 🏠 tongyuzhou.com | 📱 eutopi

Education

Brown University

PH.D. IN COMPUTER SCIENCE

Advisor: Jeff Huang

Providence, RI

2020 - present

Williams College

B.A. IN COMPUTER SCIENCE AND STATISTICS

Advisor: Iris Howley

Thesis: "Confusion Detection on Annotator Affect"

Academic Honor Societies: *Sigma Xi*, *Mu Sigma Rho*

Williamstown, MA

2016 - 2020

Aquincum Institute of Technology

COMPUTER SCIENCE STUDY ABROAD PROGRAM

Budapest, Hungary

2018 - 2019

Research Experience

Adobe – Research Scientist Intern

ADVISOR: CHANG XIAO

- Designed a system in smartphone AR that uses physical scene information to generate context-aware in-situ animations to illustrate step-wise assembly instructions.

San Jose, CA

2022

Brown University – Research Assistant

ADVISOR: JEFF HUANG

- Working on systems spanning both the web and AR domains to support individual, collective, and collaborative creativity by encouraging users to derive inspiration from their peers or by example.

Providence, RI

2020-present

Research in Industrial Projects for Students (REU at IPAM, UCLA) – Student Researcher

MENTORS: VICTOR LIN, LEAH RUCKLE, KAREN WOOD, MINH PHAM

- Designed genetic algorithms to predict Walker constellation parameters that minimized 98% global dilution of precision
- Technical report: "Combining Genetic Algorithms and Machine Learning (CgALM) for Modeling Complex Systems"

Los Angeles, CA

2019

Williams College Department of Computer Science – Research Assistant

ADVISOR: IRIS HOWLEY

- Created interactive explainables to teach Bayesian Knowledge Tracing to various levels of understanding to spread algorithmic transparency and interpretability, work was instrumental in NSF Grant #1849984

Williamstown, MA

2018

Gavril Pasternak Lab, Memorial Sloan Kettering Cancer Center – Bioinformatics Intern

MENTOR: TAKESHI IRIE

- Constructed data models and interactive cladograms to visualize relationships between G-protein coupled receptors splice variants and alternative promoters, signal peptides, and exon abundance

New York, NY

2017

Publications

* equal contribution

CONFERENCES

Sarah Bawabe*, Laura Wilson*, **Tongyu Zhou***, Ezra Marks, and Jeff Huang. (2021). The UX Factor: Using Comparative Peer Review to Evaluate Designs through User Preferences. In Proceedings of the 2021 Conference on Computer-supported Cooperative Work (CSCW '21). ACM, to appear. (**Honorable Mention Award, Impact Recognition Award**)

Jing Qian*, **Tongyu Zhou***, Meredith Young-Ng*, Jiaju Ma, Angel Cheung, Xiangyu Li, Ian Gonsler, and Jeff Huang. (2021). Portalware: Exploring Free-Hand AR Drawing with a Dual-Display Smartphone-Wearable Paradigm. In Designing Interactive Systems Conference 2021 (DIS '21). ACM, 205–219.

Jacob Chang, Rachel Duquette, Katherine Thai, **Tongyu Zhou**, Minh Pham, Victor Lin, and Karen Wood. (2020). Combining Genetic Algorithms and Machine Learning for Exploring the Navigation Satellite Constellation Design Tradespace. In Proceedings of the 33rd International Technical Meeting of the Satellite Division of The Institute of Navigation (ION GNSS+ 2020). 407–413.

Tongyu Zhou*, Haoyu Sheng*, and Iris Howley. (2020). Assessing Post-hoc Explainability of the BKT Algorithm. In Proceedings of the AAAI/ACM Conference on AI, Ethics, and Society (AIES '20). ACM, 407–413.

WORKSHOPS & EXTENDED ABSTRACTS

Young Cho, Grace Mazzarella, Kelvin Tejeda, **Tongyu Zhou**, and Iris Howley. (2020). What is Bayesian Knowledge Tracing? Poster presentation at the IEEE VIS Workshop on Visualization for AI Explainability.

Awards, Fellowships, & Grants

- 2021 **CSCW Honorable Mention Award, Impact Recognition Award**, ACM
- 2020 **Andries van Dam Graduate Fellowship**, Brown University
- 2020 **Outstanding Undergraduate Researcher Awards Honorable Mention**, CRA
- 2019 **Computer Science Class of 1960's Scholars**, Williams College
- 2018 **Summer Science Research Fellowship**, Williams College
- 2017 **Murphy Family Scholarship**, Williams College

Service

- 2021 **Paper Reviewer**, ACM CHI
- 2021 **Student Volunteer**, ACM CSCW

Teaching Experience

- 2019-2020 **Algorithm Design and Analysis**, Teaching Assistant for Shikha Singh, Williams College
- Fall 2018 **Algorithm Design and Analysis**, Teaching Assistant for William Lenhart, Williams College
- Fall 2017 **Data Structures and Advanced Programming**, Teaching Assistant for Andrea Danyluk & Iris Howley, Williams College

Mentoring

- Spring 2021 **Sarah Bawabe, Laura Wilson**, Brown HCI Lab
- Spring 2021 **Aurora Vo**, ExploreCSR program
- Fall 2020 **Ezra Marks**, Brown HCI Lab

Other Extracurricular & Work Activities

CollegeVine

Cambridge, MA

APPLICATIONS CONSULTANT

2017-2019

- Conducted one-on-one advising for college applicants, edited applications for coding camps, and worked with clients through online CS courses

Williams College Chinese-American Student Organization

Williamstown, MA

SOCIAL CHAIR

2017-2018

- Responsible for intra-organization relations through instating programs and planning events that encourage building friendships and community among current members

OTHER SKILLS

Art & Design: [portfolio]