Xiaohang Tang

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EDUCATION

University of Liverpool, Liverpool, UK   09/2021 – 07/2023

B.Sc. in Computer Science, GPA: 4.0/4.0 (Y3)   First Class (Honors) Expected

- Relevant Courses: Software Engineering, Complexity Of Algorithms, Database Development, Decision Computational Language, Advanced Artificial Intelligence

Xi'an Jiaotong-Liverpool University, Suzhou, China   08/2019 – 07/2021

B.Sc. in Information and Computing Science, GPA: 3.8/4.0 (Top 10% in Y1, Top 10% in Y2)

- Relevant Courses: Algorithmic Foundations and Problem Solving (90%, Top 2/513), Artificial Intelligence, Data Structures, Computer Systems

RESEARCH EXPERIENCE

University of Notre Dame   05/2022 – Present

HCI + NLP | Research Intern | SaNDwich Lab

Advisors: Toby Jia-Jun Li & Elena Glassman (co-advised from Harvard University)

- Aimed at establishing effective AI assistance for qualitative coding by designing an interactive human-AI collaboration system that can fit the uncertainty and ambiguity of qualitative coding.
- The proposed system can effectively recommend codes, help human users discover data characteristics and new theories, and accommodate the vague, uncertain, and iterative nature of qualitative coding.
- Helped design and develop algorithms and the system. Participated in designing and conducting the user study and the offline system experiment. Contributed to qualitative and quantitative data analyzes of the interview transcripts and the study results.

University of Liverpool   10/2021 – Present

NLP | Research Assistant | NLP@Liv

Advisor: Danushka Bollegala

- Led a research to enhance dynamic word embedding that learns semantic change across time.
- Proposed a template-based method with three unsupervised tuple selection methods in terms of frequency, diversity, and context of words and two template generation methods to learn semantic change over time. Evaluated the proposed method by time-adapting a pre-trained Masked Language Model (MLM) with our approach. The proposed method beat the SoTA approach.
- Participated in proposing the method and designing experiments. Programmed codes and executed experiments.

Xi'an Jiaotong-Liverpool University   10/2020 – 08/2021

HCI + VR + Cybersickness | Research Assistant | X-CHI Lab

Advisors: Hai-Ning Liang & Diego Monteiro

- Aimed at identifying cybersickness in a fast, precise, non-intrusive, and non-disruptive way in VR applications such as games by exploring the correlation between cybersickness and trajectory compression rate.
- Demonstrated experimentally that a machine learning approach can be used to identify changes in cybersickness using trajectory compression rate as a measurement.
- Contributed to the experiment design, analyzing trajectory and user data. Programmed VR software for experiments in Unity3D and conducted experiments. Participated in writing the paper and the patent.

HCI + VR + Accessibility + Gamification | Research Assistant | X-CHI Lab

Advisor: Hai-Ning Liang

- Researched facilitating empathy in people with non-myopia for those who suffer from myopia by two VR games.
- Investigated users experience and empathetic feelings of the two VR games with semi-structured interviews and questionnaires.
- Programmed experiment software (games) in Unity3D. Contributed to the experiments and games design, user study data analysis.

Massachusetts Institute of Technology 06/2021 – 08/2021

NLP + QA | Research Assistant | Computer Science & Artificial Intelligence Lab

Advisor: Hongyin Luo

- Researched a QA model to answer reading comprehension questions about written passages.
- Trained and evaluated the model in SQuAD dataset. Achieved results with EM score of 68.45% and F1 score of 81.35%.

SELECTED PUBLICATIONS: MY GOOGLE SCHOLAR

Full Paper

[C.3] **Xiaohang Tang**, Yi Zhou, Danushka Bollegala, in **EACL'23** [In Submission]

[C.2] Simret Araya, Zheng Zhang, **Xiaohang Tang**, Yihao Meng, Elena Glassman, Toby Jia-Jun Li, in **CHI'23** [In Submission]

[C.1] Diego Monteiro, Hai-Ning Liang, **Xiaohang Tang**, Pourang Irani, "Using Trajectory Compression Rate to Predict Changes in Cybersickness in Virtual Reality Games," in **ISMAR'21**

[J.1] Jingjing Zhang, Mengjie Huang, Rui Yang, Yiqi Wang, **Xiaohang Tang**, Ji Han, Haining Liang, in **Artificial Intelligence for Engineering Design, Analysis and Manufacturing (Cambridge University Press)** [In Submission]

Extended Abstract

[EA.2] Xiang Li, Yuzheng Chen, **Xiaohang Tang**, "GesPlayer: Using Augmented Gestures to Empower Video Players," in **ISS'22**

[EA.1] Xiang Li, **Xiaohang Tang**, Xin Tong, Rakesh Patibanda, Florian 'Floyd' Mueller, Hai-Ning Liang, "Myopic Bike and Say Hi: Games for Empathizing with The Myopic," in **CHI PLAY'21** [SGDC Finalist]

Patent

[PA.1] Diego Monteiro, Hai-Ning Liang, **Xiaohang Tang**, "A method, apparatus and storage medium for detecting user's cybersickness level in virtual environment," **[CN113283612A]**

ACADEMIC SERVICE

Reviewer: **CHI Late-Breaking Work** (2022)

Student Volunteer: **ACM UbiComp** (2022), **ACM DIS** (2022), **IEEE AIVR** (2020)

SELECTED AWARDS

ACM SIGCHI Gary Marsden Travel Award '22 ($3500)

University Academic Achievement Award '20 at XJTLU ($750, 10%)

SKILLS

Programming Languages: Python, C/C++, C#, Java, R

Tools and Frameworks: LaTeX, PyTorch, Unity3D