

Zheng Zhang

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EDUCATION

Ph.D. in Computer Science

Sep. 2019 - Now

University of Rochester, Rochester, NY

- Track: AI/HCI
- Advisor: Zhen Bai

M.S in Computer Science

Sep. 2017 – May. 2019

University of Minnesota, Minneapolis, MN

- Track: Human-Computer Interaction
- GPA: 3.89/4.0
- Advisor: Haiyi Zhu

B.Eng. in Software Engineering

Sep. 2013 - June 2017

Shaanxi Normal University, Xi'an, China

- Honor: SNUU 2017 Graduation Ceremony Valedictorian
- GPA: 3.76/4.0
- Rank: 1/87

RESEARCH EXPERIENCE

HAICOR: Human-in-the-loop tool for enhancing AI commonsense reasoning

Advisor: Zhen Bai, University of Rochester

Sep. 2019 - Now

- Designing and developing platform facilitating lay users' debugging activity of AI commonsense reasoning with intelligent argumentative scaffolding
- Developing GPT-2 based knowledge-aware commonsense reasoning model for naïve psychological need prediction on *ROCStories* dataset
- Conducting user study for testing the usability of platform

Race, Gender and Beauty: The Effect of Information Provision Affects Online Hiring Biases

Advisor: Haiyi Zhu, University of Minnesota

Jul. 2018 – Apr. 2019

- Developed study website for investigating the effects of racial, sexual, beauty bias on online hiring decision making
- Conducted online user study measuring employees' performance and characteristics as well as employers' hiring decision-making

- Conducted quantitative and qualitative analysis over user data to examine the effect of each type of bias on online hiring decision-making

Explaining Decision-Making Algorithms through UI: Strategies to Help Non-Expert Stakeholders

Advisor: Haiyi Zhu, University of Minnesota

Jun. 2018 – Sep. 2018

- Responsible for developing dataset and simulated machine learning model of graduate admission used to elicit subject feedback and design principle
- Performed subject log data processing and quantitative analysis, verify hypotheses
- Performed qualitative analysis and abstracted design strategies away from open-ended responses
- Interviewed with stakeholders and transcribed their feedbacks

Cost-effectiveness of novel strategies for cervical cancer

Advisor: Shalini Kulasingam, University of Minnesota

Jun. 2018 – Sep. 2018

- Developed markov model for predicting cost-effectiveness of candidate novel strategies for cervical cancer with TreeAge
- Performed sensitivity analyses by varying accuracy estimates (Primary, ATHENA-VBA, ATHENA non-VBA) for each screening per strategy
- Performed Cost-effectiveness analysis by employing traditional CEA with ICERs for Primary, ATHENA VBA and ATHENA non-VBA
- Analyzed intermediate results for all fundamental indicators under each accuracy estimate

Visual question answering mobile app

Advisor: Changsheng Xu, Chinese Academy of Science

Feb. 2017 - Jul. 2017

- Designed and implemented CNN model to extract features of images and question/answer pairs, and implemented visual-semantic embedding, jointly modeled word embedding and translation
- Designed crowdsourcing mechanism to refine the answer lists returned by model
- Personalized the user experience in mobile app by customizing the image
- Developed Q&A app 'V guessing', which can list top candidate answers for any question you asked about the displayed picture

PUBLICATION

Weiwen Leung*, **Zheng Zhang***, Daviti Jibuti, Jinhao Zhao, Maximilian A Klein, Casey Pierce, Lionel Robert, Haiyi Zhu. *Race, Gender and Beauty: The Effect of Information Provision Affects Online Hiring Biases*. **CHI'20** (* means equal contribution)

Hao Fei Cheng, Ruotong Wang, **Zheng Zhang**, Fiona O'Connell, Terrance Gray, Max Harper, Haiyi Zhu. *Explaining Decision-Making Algorithms through UI: Strategies to Help Non-Expert Stakeholders*. **CHI'19**

TEACHING EXPERIENCE

CSC280: Computer Models and Limitations Fall 2020
University of Rochester, Rochester, NY

CSC282/482: Design and Analysis of Algorithm Spring 2019
University of Rochester, Rochester, NY

HONORS (Selected)

SNNU Pacemaker to Merit Student – top 0.05% 2016
Shaanxi Normal University

National Scholarship – top 3% 2014
The Ministry of Education of P.R. China

SNNU Fellowship (6 times, top 5%) 2013 - 2017
Shaanxi Normal University

RESEARCH MENTORING

Hecong Wang Spring 2020 - Present
University of Rochester, BS in Computer Science and Physics
Working on HAICOR project

Richie Magnotti Fall 2019 - Present
University of Rochester, MS in Computer Science
Working on HAICOR project

Phuong Vu Spring 2020 - Present
University of Rochester, BS in Computer Science and Mathematics
Working on HAICOR project

**PROFESSIONAL
SERVICE**

Reviewer: AIED'20
Student Volunteer: AAAI'20

Computer Skills

Programming skills: C/C++, Java, Python, Javascript, React, Pytorch, Flask, SQL

UX skills: qualitative research, quantitative research, data analysis, UX design

Keywords: Commonsense Reasoning, Natural Language Processing, Deep Learning, Web Programming, Human-in-the-loop Machine Learning