Lu Sun

CONTACT INFORMATION

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EDUCATION

UC San Diego, CA, United States 2019 - present
PhD, Cognitve Science Department, The DesignLab
- Advisor: **Prof. Steven Dow**

Carnegie Mellon University(CMU), PA, United States 2017 - 2018
Masters of Educational Technology and Applied Learning Science (METALS)
Human Computer Interaction Institute, School of Computer Science
- Advisor: **Prof. Robert E.Kraut**, **Prof. Kenneth R. Koedinger**, **Prof. Diyi Yang**

Beijing University of Posts and Telecommunications(BUPT), Beijing, China 2013 - 2017
Bachelor of Engineering in Telecommunication Engineering
- Advisor: Prof. Wensheng Sun

PUBLICATIONS

[1] **Lu Sun**, Robert E. Kraut, Diyi Yang "Multi-level Modeling of Social Roles in Online Micro-lending Platforms"*In Proceedings of The 22nd ACM Conference on Computer-Supported Cooperative Work and Social Computing* (CSCW'19)

[2] Kenneth Koedinger, **Lu Sun**, Elizabeth A. McLaughlin "Using a Hierarchical Model to Get the Best of Both Worlds: Good Prediction and Good Explanation"*In Proceedings of the 11th International Conference on Educational Data Mining pp.588-591* (EDM'18 Poster paper).

[3] Yuntao Wang, Ke Sun, **Lu Sun**, Chun Yu, and Yuanchun Shi. "SkinMotion: what does skin movement tell us?."*In Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Adjunct, pp. 914-917. ACM, 2016.* (UBICOMP'16 ADJUNCT).

PROFESSIONAL EXPERIENCE

Full-time Funded Research Assistant, CMU HCII Sep. 2018 - June. 2019
Advisor: Prof. Bruce M. McLaren
- Program an instructional software in Virtual Reality(VR) to support the instruction of manufacturing lab course for undergraduate students

RESEARCH EXPERIENCE

Research Assistant, UCSD The DesignLab Jul. 2019 -Present
Advisor: Prof. Steven Dow
Project: CrowdCivic: An Online Platform for Scaffolding the Crowd Feedback Exchange in Civic Design
- Designing and developing a system to support feedback exchange in civic design challenge D4SD(Design for San Diego)

Project: Understanding Discussion of Data Visualization on Newspaper Websites
- Submitted the work to CSCW 2020

Independent Study, CMU HCII Jan. 2018 - Sep. 2018
Advisor: Prof. Robert E.Kraut. Prof. Diyi Yang
Project: Understanding Emergent Social Roles and Role Effectiveness in a Crowdfunding Site
- Applied Gaussian Mixture Model to automatically generate emergent social roles
- Utilized natural language processing techniques to extract features
- Evaluated social roles quantitatively and qualitatively using crowdsourcing

Independent Study, LearnLab, CMU HCII Oct. 2017 - Sep. 2018
Advisor: Prof. Kenneth R. Koedinger
Project: Using a Hierarchical Model to analyze educational data

- Designed and implemented hierarchical mixed effect regression model to investigate the granularity of learning transfer
- Ran cross validation test on student-blocked and item-blocked data and visualized the student performance to find the overestimate data

Research Intern, Articulab, CMU HCII Jan. 2017 - May.2017
Advisor: Prof. Justine Cassell and Prof. Zhen Bai
Project: SCIPR (Sensing Curiosity in Play and Responding),

- Designed hand gestures coding scheme
- Found sequential behavioral patterns that maximize curiosity using high utility sequential rules mining technique
- Designed and implemented a tangible interface system to support the physical collaboration between agent and children, utilizing augmented reality to visual the position and robot to manipulate the objects

Research Assistant , Pervasive HCI Group, Tsinghua University Aug. 2015 - Aug. 2016
Advisor: Prof. Yuanchun Shi
Project: SkinMotion

- Utilized the linear regression method to achieve an accuracy of 99.7%
- Achieved 5.84 estimate error for proximal phalanx flexion on average and low training burden with 4.63% accuracy increase with more than one training data

COURSE PROJECTS

Adaptive Learning System Design (Capstone Project) Jan.2018 - Aug.2018
Client: Cross Domain
Role: Data Analyst

- Designed and implemented the Bayesian Knowledge Tracing(BKT) in adaptive learning system to do question selection
- Analyzed and visualized student performance data in Chinese high school math learning
- Analyzed experiment results on learner's self-regulation ability and evaluated the adaptivity of system

Exploration on Deep Knowledge Tracing Nov.2017 - Dec.2017
Instructor: Prof. John Stamper

- Implemented a deep knowledge tracing model using Long Short Term Memory(LSTM) and compare the model with Bayesian Knowledge Tracing(BKT) on ASSISTments dataset

MiniJS:Personalized Javascript Tutor for semi-novices Mar.2018 - Apr.2018
Collaborator: Siyu Chen

- Implemented the cognitive tutor to help learners program javascript and use P5.js library
- Developed the targeted feedbacks and scaffolding hints for the tutoring system

Online course design for UCRE Oct.2017 - Dec.2017

- Designed the online section 'Heuristic Evaluation' for 'User Centered Research Evaluation'(UCRE) course using backwards design, learning principles and cognitive task analysis
- Conducted the controlled user experiment and found 'self-explanation' instruction principle improved online learning

HONORS AND AWARDS

- 1st Scholarship of Beijing University of Posts and Telecommunications 2014, 2015
- 2nd of National Undergraduate Electronics Design Contest 2014

TECHNICAL SKILLS

Programming Languages:

- Experienced: Python,R
- Familiar: HTML, JavaScript, Jquery, Node.JS, React,C#
- Experienced Tools: pyTorch