
| | |
|--|--|
| Research Interests | Human-centered Machine Learning; Human-AI Interaction; Algorithm Auditing; Crowdsourcing; Social Computing; Fairness, Accountability, and Transparency. |
| Education | <p>Carnegie Mellon University, Pittsburgh, PA Ph.D. in Human-Computer Interaction, School of Computer Science 2021 - now Advisors: Ken Holstein & Motahhare Eslami. Selected Coursework: Machine Learning in Production, Experimental Design for Behavioral and Social Sciences</p> <p>University of California, Berkeley, Berkeley, CA B.A. in Computer Science; Certificate in New Media Study Highest Distinction & EECS Research Honor 2017 - 2020 Research Advisors: Niloufar Salehi & Kimiko Ryokai. Selected Coursework: Machine Learning, Deep Learning, Convex Optimization, Data Science(A+), Information System(A+), HCI Research.</p> |
| Conference Publications <i>Stringently Peer-reviewed</i> | <p>[P7] Wesley H. Deng, Monica Chang, Nur Yildirim, Motahhare Eslami, Ken Holstein, Michael Madaio. (2023). Cross-functional Collaboration for AI Fairness in Industry Practice. <i>In Preparation for FAccT '23</i></p> <p>[P6] Wesley H. Deng, Boyuan Bill Guo, Alicia DeVrio, Hong Shen, Motahhare Eslami, Ken Holstein. (2023). Understanding Practices, Challenges, and Opportunities for User-Engaged Algorithm Auditing in Industry Practice. <i>Conditionally accepted for CHI ' 23</i></p> <p>[P5] Wesley H. Deng, Manish Nagireddy, Michelle Seng Ah Lee, Jatinder Singh, Zhiwei Steven Wu, Kenneth Holstein, Haiyi Zhu. (2022). Exploring How Machine Learning Practitioners (Try To) Use Fairness Toolkits. <i>In Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency (FAccT '22)</i></p> <p>[P4] Hong Shen, Leijie Wang, Wesley H. Deng, Ciell, Ronald Velgersdijk, Haiyi Zhu. (2022). The Model Card Authoring Toolkit: Towards Community-centered, Deliberation-driven AI Design. <i>In Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency (FAccT '22)</i></p> <p>[P3] Dan Liebling, Katherine Heller, Samantha Roberston, Wesley H. Deng. (2022). Opportunities for Human-centered Evaluation of Machine Translation Systems <i>In Proceedings of the 2022 North American Chapter of the Association for Computational Linguistics (NAACL '22)</i></p> <p>[P2] Hong Shen, Wesley H. Deng, Aditi Chattopadhyay, Steven Wu, Xu Wang, Haiyi Zhu. (2021). Value Cards: An Educational Toolkit for Teaching Social Impacts of Machine Learning through Deliberation. <i>In Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency (FAccT '21)</i></p> <p>[P1] Jon Gillick, Wesley H. Deng, Kimiko Ryokai, David Bamman. Robust Laughter Detection in Noisy Environments. (2021) <i>In Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP '21)</i></p> |

**Workshop
Publications**
*Lightly
Peer-reviewed*

[WP4] **Wesley H. Deng**, Nikita Mehandru, Samantha Roberston, Niloufar Salehi. Beyond General Purpose Machine Translation: The Need for Context-specific Empirical Research to Design for Appropriate User Trust. *Workshop on Trust and Reliance in AI-Human Teams; CHI 2022*

[WP3] **Wesley H. Deng**, Manish Narigeddy, Zhiwei Steven Wu, Kenneth Holstein, Haiyi Zhu. Evaluating Fairness in Practice: Exploring How Machine Learning Practitioners Use Fairness Toolkits. *Human-Centered AI Workshop; NeurIPS 2021*

[WP2] Samantha Roberston, **Wesley H. Deng**, Timnit Gebru, Margaret Mitchell, Dan Liebling, Michal Lahav, Katherine Heller, Mark Diaz, Samy Bengio, Niloufar Salehi. Three Directions for the Design of Human-Centered Machine Translation. *1st HCI + NLP Workshop, NAACL 2021*

[WP1] Kimiko Ryokai, Julia Park, **Wesley H. Deng**. Personal laughter archives: reflection through visualization and interaction. *Adjunct Proceedings of the 2020 ACM International Conference on Ubiquitous Computing (UbiComp 2020)*

**Research
Experience**

4A Lab, Carnegie Mellon University Summer 2021 - now
Ph.D. Student
Research supervisors: Motahhare Eslami
Research Topics: Human-centered ML ([P7], [P8]), Algorithm Auditing [P7]

CoALA Lab, Carnegie Mellon University Fall 2020 - now
Pre-Doctoral Research Assistant & Ph.D. Student
Research supervisors: Ken Holstein
Research Topics: Human-centered ML ([WP3], [P5], [P7], [P8]), Algorithm Auditing ([P7])

Social AI Group, Carnegie Mellon University Fall 2020 - Fall 2021
Pre-Doctoral Research Assistant
Research supervisors: Haiyi Zhu and Steven Wu
Research Topics: Human-centered ML ([P2], [P4], [P5]), ML Fairness ([WP3], [P5]) and Social Computing [P6]

**To3 Group, University of California, Berkeley
& Google Ethical AI, Google** Fall 2019 - Fall 2020
Undergraduate Research Assistant
Research supervisors: Niloufar Salehi
Research Topics: Human-centered AI for Machine Translation ([WP2], [WP4], [P3])

BioSENSE Lab, University of California, Berkeley Fall 2018 - Fall 2020
Undergraduate Research Assistant
Research supervisors: Kimiko Ryokai and David Bamman
Research Topics: Design [WP1] and Ubiquitous computing ([WP1], [P1])

**Honor and
Awards**

CMU Graduate Student Travel Grant,
\$750, Carnegie Mellon University 2022

CERES (Connecting the EdTech Research EcoSystem) Fellowship
through Jacobs Foundation, Carnegie Mellon University 2021

Special Recognitions for Outstanding Reviews,
CSCW 2021

EECS Undergraduate Research Honor,
Electrical Engineering and Computer Science, UC Berkeley 2020

| | | |
|----------------------------------|---|------------------|
| | Highest Distinction , School of Letter and Science, UC Berkeley | 2020 |
| | Dean's List , School of Letter and Science, UC Berkeley | 2018, 2019, 2020 |
| | First Price for Chinese National Physics Olympiad (60/22,000) | 2015 |
| Invited Talk and Panelist | Understanding Practices, Challenges, and Opportunities for User-Engaged Algorithm Auditing in Industry Practice | |
| | Invited talk at Algorithmic Fairness and Opacity (AFOG) Group | 10/2022 |
| | Exploring How ML Practitioners (Try To) Use Fairness Toolkits | |
| | Invited talk at IBM AIF360 developer team monthly meeting | 07/2022 |
| | Invited talk at Fairlearn developer team meeting | 03/2021 |
| | Other talks and panels | |
| | Invited panelist, "Flavor of HCI" hosted by Carnegie Mellon University, User Experience Association | 11/2022 |
| | Invited speaker, "Applying for Ph.D. programs in Human-Computer Interaction" hosted by UC Berkeley, Chinese Student Association | 07/2022 |
| | Invited panelist, Graduate School Application Panel, hosted by Carnegie Mellon University, REU Summer Program in HCII | 06/2022 |
| | Invited presenter, Design Innovation Lecture Series, hosted by UC Berkeley, Jacobs Institute for Design Innovation | 08/2022 |
| | Invited panelist, EECS Research Honor program panel, hosted by UC Berkeley, EECS Honor program | 03/2021 |
| | Invited presenter, Designing Emergent Technology, hosted by UC Berkeley, Jacobs Institute for Design Innovation | 12/2019 |
| Selected Press | 12/2022, WIRED , ChatGPT, Galactica, and the Progress Trap: When large language models fall short, the consequences can be serious. Why is it so hard to acknowledge that? | |
| | 11/2021, CMU HCII , HCII Researchers To Study Improving Algorithm, Computer Science Education as Part of CERES Network. | |
| Academic Service | Program Committee FAccT 2022, 2023 Empathy-centric Design at Scale Workshop, CHI 2022 | |
| | Conference Reviewer CHI 2021, 2022, 2023 CSCW 2021, 2022, 2023 | |

FAccT 2021, 2022
ICASSP 2021
TEI 2023

Others

CMU Responsible AI Initiative Ph.D. social Hour: Organizer 2022
CMU HCII Ph.D. student CHI practice talk: Organizer 2022
CMU HCII Ph.D. student Social Hour: Organizer 2021, 2022
CMU Ph.D. Application Assistance for underrepresented applicants: Participants 2021
CMU HCII Ph.D. Junior-Senior Coffee chat: Co-organizer 2021

Research Mentorship

Xiaofeng Yan, CMU, Master Student Research Assistant Fall 2022 - Now
Jieyu Zhou, CMU, Master Student Independent Study Spring - Now
Shixian Xie, CMU, Master Student Independent Study Summer 2022 - Now
Bill Guo, CMU, Undergraduate HCI Research Assistant Summer 2021 - Fall 2022
Anthony Pan, CMU, Undergraduate Design Project Fall 2022
Christy Zo, CMU, Undergraduate Design Project Fall 2022
Rebecca Jiang, CMU, Undergraduate HCI Independent Study Summer 2022
Vivek Nadig, Valley Christian High School, High School student Summer 2022
Andrew Sim, CMU, Master Student Independent Study Spring 2022
Harnoor Dhingra, CMU, Master Student Independent Study Spring 2022
Susan Huang, CMU, Undergraduate HCI Research Assistant Fall 2021
Alice Tran, CMU, Undergraduate HCI Research Assistant Fall 2021
Leijie Wang, Tsing-hua University, Undergraduate HCI Research Assistant
Now UW CSE Ph.D. Spring 2021

Teaching

Data Science, *Data 100*, UC Berkeley Undergraduate TA; 2020
Probability Theory, *Statistics 134*, UC Berkeley Group Tutor; 2019
Data Structure, *CS 61B*, UC Berkeley Lab Assistant; 2019
Introduction of Computing, *CS 61A*, UC Berkeley Lab Assistant; 2018
Physics for Engineers, *Physics 7A*, UC Berkeley One-on-one Tutor; 2018

Skills

Languages: Python, R, HTML/CSS/JavaScript, C, Java, MATLAB, SQL, \LaTeX .
Machine Learning: PyTorch, TensorFlow, NumPy, Pandas, Scikit-Learn, MapReduce, NLTK, PyData, SciPy.
Design: Figma, Miro, Photoshop, Illustrator, Visualization (D3.js/ggplot2/Seaborn).
Natural Languages: English, Chinese.