Markelle Kelly

COMPUTER SCIENCE PH.D. CANDIDATE

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Research Interests

I aim for fair and human-centered machine learning by developing tools for holistic model evaluation and techniques for understanding and improving human-AI interaction.

Education

PH.D. IN COMPUTER SCIENCE   *09/2020 – 06/2025 (expected)*

University of California, Irvine

M.S. IN COMPUTER SCIENCE   *09/2020 – 03/2022*

University of California, Irvine • 4.0 GPA

B.S. IN STATISTICS   *09/2016 – 06/2020*

California Polytechnic State University, San Luis Obispo • 4.0 GPA

Experience

GRADUATE STUDENT RESEARCHER   *08/2020 – Present*

University of California, Irvine

APPLIED RESEARCH INTERN: RESPONSIBLE AI   *06/2024 – 09/2024*

eBay

DATA-CENTRIC ML INTERN   *07/2023 – 10/2023*

Apple

RESEARCH ASSISTANT   *03/2019 – 06/2020*

California Polytechnic State University, San Luis Obispo

SOFTWARE ENGINEER INTERN   *03/2018 – 06/2020*

Project Jupyter

Publications

"Understanding Systematic Miscalibration in Machine Learning Classifiers"

Markelle Kelly & Padhraic Smyth   *TREX @ IEEE VIS 2022*

"Variable-based Calibration in Machine Learning Classifiers"

Markelle Kelly & Padhraic Smyth   *AAAI 2023*

"Capturing Humans' Mental Models of AI: An Item Response Theory Approach"

Markelle Kelly, Aakriti Kumar, Mark Steyvers & Padhraic Smyth   *FAccT 2023*

"Perceptions of Linguistic Uncertainty by Language Models and Humans"
Catarina Belem*, **Markelle Kelly***, Sameer Singh & Padhraic Smyth   *EMNLP 2024*
"Benchmark Data Repositories for Better Benchmarking"
Rachel Longjohn*, **Markelle Kelly***, Sameer Singh & Padhraic Smyth   *NeurIPS 2024*
"Bayesian Prediction of Correlated Expert Opinions in a Human-AI Setting"
Markelle Kelly, Alex Boyd, Sam Showalter, Mark Steyvers & Padhraic Smyth   *Under review*

Fellowships & Awards

HPI RESEARCH CENTER FELLOWSHIP   *07/2022*
HPI Research Center in Machine Learning and Data Science at UCI

NOYCE FELLOWSHIP   *01/2022*
Irvine Initiative in AI, Law, and Society

CREATE FELLOWSHIP   *06/2021*
UCI Steckler Center for Responsible, Ethical, and Accessible Technology

ENHANCED EXCELLENCE FELLOWSHIP   *09/2020*
UCI Computer Science Department

DEAN'S AWARD   *09/2020*
UCI Computer Science Department

GRADUATE DEAN'S RECRUITMENT FELLOWSHIP   *09/2020*
UCI Computer Science Department

CLASS OF 2020 ACADEMIC EXCELLENCE AWARD   *06/2020*
Cal Poly College of Science and Math

BEST VISUALIZATION   *04/2019*
UCLA DataFest

Teaching & Academic Activities

WORKSHOP ORGANIZER • MLDPR at ICLR   *04/2025*

UCI TEACHING ASSISTANT • Probabilistic Learning   *01/2025 – 03/2025*

REVIEWER • Cognitive Research: Principles and Applications   *03/2024*

UCI TEACHING ASSISTANT • Project in AI   *09/2022 – 12/2022*

REVIEWER • NeurIPS Datasets and Benchmarks Track   *07/2022*

WORKSHOP ASSISTANT • MolSSI Data Analysis Workshop   *07/2019*

CAL POLY TEACHING ASSISTANT • Honors Calculus III & IV   *01/2018 – 06/2018*