

Markelle Kelly

COMPUTER SCIENCE PH.D. STUDENT

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Research Interests

I am interested in the development of tools for more interpretable, interactive, and accountable machine learning; my research centers on understanding and improving human-machine interaction.

Education

B.S. IN STATISTICS	09/2016 – 06/2020
California Polytechnic State University, San Luis Obispo • 4.0 GPA	
M.S. IN COMPUTER SCIENCE	09/2020 – 03/2022
University of California, Irvine • 4.0 GPA	
PH.D. IN COMPUTER SCIENCE	09/2020 – Present
University of California, Irvine	

Research Positions

SOFTWARE ENGINEER INTERN	03/2018 – 06/2020
Project Jupyter	
RESEARCH ASSISTANT	03/2019 – 06/2020
California Polytechnic State University, San Luis Obispo	
GRADUATE STUDENT RESEARCHER	08/2020 – Present
University of California, Irvine	

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	Accepted to AAAI 2023
“Mental Models of Machine Learning Agents”	
Markelle Kelly, Aakriti Kumar, Mark Steyvers & Padhraic Smyth	In Preparation

Fellowships & Awards

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

NOYCE FELLOWSHIP	<i>01/2022</i>
The Noyce Initiative at UCI	
SUMMER FELLOWSHIP	<i>06/2021</i>
UCI Steckler Center for Responsible, Ethical, and Accessible Technology	
ENHANCED EXCELLENCE FELLOWSHIP	<i>09/2020</i>
UCI Computer Science Department	
DEAN'S AWARD	<i>09/2020</i>
UCI Computer Science Department	
GRADUATE DEAN'S RECRUITMENT FELLOWSHIP	<i>09/2020</i>
UCI Computer Science Department	
CLASS OF 2020 ACADEMIC EXCELLENCE AWARD	<i>06/2020</i>
Cal Poly College of Science and Math	
BEST VISUALIZATION	<i>04/2019</i>
UCLA DataFest	

Presentations

WORKSHOP TALK • “Understanding Systematic Miscalibration in ML Classifiers”

TREX at IEEE VIS 2022

INVITED TALK • “Building a Single-Document Jupyter Application with Lab Components”

BERKELEY INSTITUTE FOR DATA SCIENCE 2019

POSTER • “Let’s ToC about Tags”

JUPYTERCON 2018

Highlighted Open-Source Projects

CONTRIBUTOR • JupyterLab

Web-based environment for reproducible, interactive computing

CORE CONTRIBUTOR • JupyterLab celltags

JupyterLab extension for manipulating tags in cell metadata

CORE CONTRIBUTOR • JupyterLab Table of Contents

JupyterLab extension that generates interactive tables of contents for notebooks

Teaching & Academic Service

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

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

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

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