

Umang Bhatt

CONTACT INFORMATION	usb20@cam.ac.uk umangsbhatt.github.io	
EDUCATION	University of Cambridge , Cambridge, UK Ph.D. in Engineering (Machine Learning) <ul style="list-style-type: none">• <i>Advisor:</i> Adrian Weller• <i>Affiliations:</i> Machine Learning Group, Computation and Biological Learning Lab Carnegie Mellon University , Pittsburgh, PA M.S. in Electrical and Computer Engineering <ul style="list-style-type: none">• <i>Advisor:</i> José M.F. Moura B.S. in Electrical and Computer Engineering	Sept 2019 – Present Aug 2017 – May 2019 Aug 2015 – May 2019
POSITIONS	Enrichment Student, The Alan Turing Institute Fellow, Mozilla Foundation Student Fellow, Leverhulme Center for the Future of Intelligence PhD Candidate, University of Cambridge Research Fellow, Partnership on AI Research Assistant, Carnegie Mellon University <ul style="list-style-type: none">• <i>Mentors and Collaborators:</i> Pradeep Ravikumar (MLD), Zico Kolter (CSD), Fei Fang (ISR), and Radu Marculescu (ECE)	Starting Jan 2021 Oct 2020 – Present Sept 2019 – Present Sept 2019 – Present May 2019 – Present Jan 2017 – Aug 2019
FELLOWSHIPS, AWARDS, AND HONORS	Mozilla Fellowship The Alan Turing Institute Enrichment Studentship Leverhulme Center for the Future of Intelligence PhD Scholarship Fully funded by DeepMind and the Leverhulme Trust Partnership on AI Research Fellowship Lovett Family Endowed Scholarship , The Andrew Carnegie Society Undergraduate Research Presentation Award , CMU NSF I-Corps Site Award , for research commercialization H. F. McCullough Memorial Scholarship , CMU	2020 – 2021 2020 – 2021 2019 – 2022 2019 – 2021 2019 2017 2017 2016
PEER-REVIEWED CONFERENCE PUBLICATIONS	[1] Evaluating and Aggregating Feature-based Explanations <i>International Joint Conference on Artificial Intelligence (IJCAI) 2020</i> Umang Bhatt , Adrian Weller, José M.F. Moura [2] Explainable Machine Learning in Deployment <i>ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2020</i> Umang Bhatt , Alice Xiang, Shubham Sharma, Adrian Weller, Ankur Taly, Yunhan Jia, Joydeep Ghosh, Ruchir Puri, José M.F. Moura, Peter Eckersley [3] You Shouldn't Trust Me: Learning Models Which Conceal Unfairness From Multiple Explanation Methods <i>European Conference on Artificial Intelligence (ECAI) 2020</i> Botty Dimanov, Umang Bhatt , Mateja Jamnik, Adrian Weller [4] On Network Science and Mutual Information for Explaining Deep Neural Networks <i>IEEE Conference on Acoustics, Speech and Signal Processing (ICASSP) 2020</i> Brian Davis*, Umang Bhatt *, Kartikeya Bhardwaj*, Radu Marculescu, José M.F. Moura	

	<p>[5] A Robot’s Expressive Language Affects Human Strategy and Perceptions in a Competitive Game <i>IEEE Conference on Robot and Human Interactive Communication (ROMAN) 2019</i> Aaron Roth, Samantha Reig, Umang Bhatt, Johnathan Schulgach, Tamara Amin, Afsaneh Doryab, Fei Fang, Manuela Veloso</p> <p>[6] Intelligent Pothole Detection and Road Condition Assessment <i>Bloomberg Data for Good Exchange (D4GX) 2017</i> Umang Bhatt, Edgar Xi, Shouvik Mani, J. Zico Kolter</p>	
BOOK CHAPTERS	<p>[7] On Trustworthy Artificial Intelligence for Healthcare <i>Healthcare Information Technology for Cardiovascular Medicine</i>. Ed: A. Maniar. Springer 2020 Umang Bhatt, Zohreh Shams</p>	
SELECT WORKSHOP PUBLICATIONS	<p>[8] Machine Learning Explainability for External Stakeholders <i>IJCAI Workshop on Explainable AI 2020</i> Umang Bhatt, McKane Andrus, Alice Xiang, Adrian Weller</p> <p>[9] Getting a CLUE: A Method for Explaining Uncertainty Estimates <i>ICLR Workshop on Machine Learning in Real Life 2020 (Oral)</i> Javier Antorán, Umang Bhatt, Tameem Adel, Adrian Weller, José Miguel Hernández-Lobato</p> <p>[10] Counterfactual Accuracies for Alternative Models <i>ICLR Workshop on Machine Learning in Real Life 2020</i> Umang Bhatt, Adrian Weller, Muhammad Bilal Zafar, Krishna Gummadi</p> <p>[11] Diagnostic Model Explanations: A Medical Narrative <i>AAAI Spring Symposium on Interpretable AI for Well-Being 2019 (Best Presentation Award)</i> Umang Bhatt, Brian Davis, José M.F. Moura</p> <p>[12] Building Human-Machine Trust via Interpretability (Extended Abstract) <i>AAAI Conference on Artificial Intelligence (AAAI) 2019</i> Umang Bhatt, Pradeep Ravikumar, José M.F. Moura</p> <p>[13] Maintaining the Humanity of Our Models <i>AAAI Spring Symposium on AI, Society, and Ethics 2018</i> Umang Bhatt</p>	
INVITED TALKS	<p><i>Challenges in Deploying Explainable Machine Learning</i></p> <ul style="list-style-type: none"> • Robust and Responsible AI (RsqrD) Developers Meetup July 2020 • Keynote: ICML Workshop on Extending Explainable AI July 2020 • QuantumBlack (McKinsey) AI seminar May 2020 <p><i>Explainable Machine Learning in Deployment</i></p> <ul style="list-style-type: none"> • Cambridge Observatory for Human-Machine Collaboration Sept 2020 • Keynote: Mozilla All-Hands June 2020 • ACM Conference on Fairness, Accountability, and Transparency (FAccT) Jan 2020 <p><i>Aggregating Feature-based Model Explanations</i></p> <ul style="list-style-type: none"> • Fiddler Labs May 2019 • Cambridge Machine Learning Group Apr 2019 • AAAI Spring Symposium on Interpretable AI for Well-being Mar 2019 <p><i>Neural Information Flow</i></p> <ul style="list-style-type: none"> • Element AI Dec 2018 <p><i>Maintaining the Humanity of Our Models</i></p> <ul style="list-style-type: none"> • AILA Symposium on Creating a Fair and Ethical Future Oct 2018 • AAAI Spring Symposium on AI and Society Mar 2018 <p><i>Intelligent Pothole Detection</i></p> <ul style="list-style-type: none"> • University of Chicago’s Data Science for Social Good Conference Oct 2017 • Bloomberg Data for Good Exchange Sept 2017 	

TEACHING EXPERIENCE	Thesis Co-Supervisor , University of Cambridge	
	• Daniel Ley, MEng Thesis	Aug 2020 – Present
	Teaching Assistant , Carnegie Mellon University	
	• <i>Machine Learning for Engineers - Masters</i> (18-661) for Gauri Joshi	Spring 2019
	• <i>Machine Learning - PhD</i> (10-701) for Ziv Bar-Joseph and Pradeep Ravikumar	Fall 2018
	• <i>Practical Data Science</i> (15-688) for Zico Kolter	Spring 2018
	• <i>Principles of Imperative Computation</i> (15-122) for Illiano Cervesato	Fall 2017
	• <i>Principles of Computing</i> (15-110) for Margret Reid-Miller	Spring 2017
PROFESSIONAL SERVICE	Co-Organizer	
	• ICML Workshop on Human Interpretability in Machine Learning	July 2020
	• IBM + Partnership on AI Workshop on Explainable AI	Feb 2020
	Program Committee	
	• ACM Conference on Fairness, Accountability, and Transparency (FAccT)	2021
	• Conference on Artificial Intelligence (AAAI)	2021
	• International Conference on Learning Representations (ICLR)	2021
	• Conference on Neural Information Processing Systems (NeurIPS)	2020
	• ACM Conference on AI and Finance (ICAIF)	2020
	• ICLR Workshop on Debugging Machine Learning Models	2019
PROFESSIONAL EXPERIENCE	Reviewer	
	• IEEE Transactions on Artificial Intelligence	
	Advisor, Credo AI , Palo Alto, CA	June 2020 – Aug 2020
	• Creating an AI auditing platform - in stealth	
	Student Fellow, .406 Ventures , Boston, MA	July 2018 – June 2020
	• Sourced startups and performed first-round due diligence on ventures	
	Program Management Intern, Microsoft , Redmond, WA	May 2018 – Aug 2018
	• Project: explainable conversational agents for technical hardware documentation	
	Co-Founder, Perceptsense , Pittsburgh, PA	Jan 2017 – May 2018
	• Built products to harvest vehicular telematics data; pipeline acquired by Honda Motors	
	Product Management Intern, Groupon , Chicago, IL	May 2017 – Aug 2017
	• Project: personalized and targeted pricing algorithms to drive purchase frequency	
	Software Engineering Intern, InquisitHealth , River Edge, NJ	June 2016 – Sept 2016
	• Project: speaker diarization and adverse event detection in doctor-patient conversations	