

Education

- 2019 – 2023 **University of Cambridge**, Cambridge, UK.
Ph.D. in Machine Learning, Department of Engineering – Supervisor: Adrian Weller
Affiliations: Machine Learning Group, Computational and Biological Learning Lab
- 2015 – 2019 **Carnegie Mellon University**, Pittsburgh, PA.
B.S. and M.S., Electrical and Computer Engineering – Advisor: José Moura

Fellowships and Positions

- 2021 - now **The Alan Turing Institute**, *Enrichment Student*, London, UK.
Safe and Ethical AI Research Team
- 2019 – now **Leverhulme Center for the Future of Intelligence**, *Student Fellow*, Cambridge, UK.
- 2019 – now **Partnership on AI**, *Research Fellow*, San Francisco, CA.
- 2017 – 2019 **Carnegie Mellon University**, *Research Assistant*, Pittsburgh, PA.
Worked with José Moura (ECE), Pradeep Ravikumar (MLD), Radu Marculescu (ECE), Fei Fang (ISR), Zico Kolter (CSD), and Manuela Veloso (MLD)

Publications

Conference Papers

- [C7] **Umang Bhatt**, Adrian Weller, & José Moura. Evaluating and Aggregating Feature-based Model Explanations. To appear at the International Joint Conference on Artificial Intelligence (IJCAI) 2020. Yokohama, Japan.
- [C6] **Umang Bhatt**, Alice Xiang, Shubham Sharma, Adrian Weller, Ankur Taly, Yunhan Jia, Joydeep Ghosh, Ruchir Puri, José Moura, & Peter Eckersley. Explainable Machine Learning in Deployment. ACM Conference on Fairness, Accountability, and Transparency (FAT*) 2020. Barcelona, Spain.
- [C5] Boty Dimanov, **Umang Bhatt**, Mateja Jamnik, & Adrian Weller. You Shouldn't Trust Me: Learning Models Which Conceal Unfairness From Multiple Explanation Methods. European Conference on Artificial Intelligence (ECAI) 2020. Santiago de Compostela, Spain.
- [C4] Brian Davis*, **Umang Bhatt***, Kartikeya Bhardwaj*, Radu Marculescu, & José Moura. On Network Science and Mutual Information for Explaining Deep Neural Networks. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2020. Barcelona, Spain.
- [C3] Aaron Roth, Samantha Reig, **Umang Bhatt**, Johnathan Schulgach, Tamara Amin, Afsaneh Doryab, Fei Fang, & Manuela Veloso. A Robot's Expressive Language Affects Human Strategy and Perceptions in a Competitive Game. IEEE International Conference on Robot and Human Interactive Communication (ROMAN) 2019. New Delhi, India.
- [C2] **Umang Bhatt**, Pradeep Ravikumar, & José Moura. Building Human-Machine Trust via Interpretability. Extended Abstract. AAAI Conference on Artificial Intelligence (AAAI) 2019. Honolulu, HI.

- [C1] **Umang Bhatt**, Edgar Xi, Shouvik Mani, & J. Zico Kolter. Intelligent Pothole Detection and Road Condition Assessment. Bloomberg Data for Good Exchange (D4GX) 2017. New York, NY.

Selected Workshop Papers

- [W4] Javier Antorán, **Umang Bhatt**, Tameem Adel, Adrian Weller, & José Miguel Hernández-Lobato. Getting a CLUE: A Method for Explaining Uncertainty Estimates. ICLR Workshop on Machine Learning in Real Life (ML-IRL) 2020. Addis Ababa, Ethiopia. **(Selected Oral Presentation)**
- [W3] **Umang Bhatt**, Adrian Weller, Muhammad Bilal Zafar, & Krishna Gummadi. Counterfactual Accuracies for Alternative Models. ICLR Workshop on Machine Learning in Real Life (ML-IRL) 2020. Addis Ababa, Ethiopia.
- [W2] **Umang Bhatt**, Brian Davis, & José Moura. Diagnostic Model Explanations: A Medical Narrative. AAAI Spring Symposium on Interpretable AI for Well-Being 2019. Stanford, CA.
- [W1] **Umang Bhatt**. Maintaining the Humanity of Our Models. AAAI Spring Symposium on AI, Society, and Ethics 2018. Stanford, CA.

Scholarships and Awards

- 2019 – 2022 Leverhulme Center for the Future of Intelligence PhD Scholarship
- 2019 – 2021 Partnership on AI Research Fellowship
- 2019 Lovett Family Endowed Scholarship
- 2019 Best Presentation Award at The AAAI Spring Symposium on Interpretable AI for Well-Being
- 2017 Carnegie Mellon Undergraduate Research Presentation Award
- 2017 NSF I-Corps Site Award – for research commercialization
- 2016 H. F. McCullough Memorial Scholarship

Selected Talks

- 2020 Invited Talk at QuantumBlack (McKinsey) AI Seminar. May 2020. London, UK.
- 2019 Invited Talk at Fiddler Labs. May 2019. Palo Alto, CA.
- 2019 Invited Talk at Cambridge Machine Learning Group. April 2019. Cambridge, UK.
- 2018 Invited Talk and Moderator at AI LA's AI Ethics Symposium. October 2018. Pasadena, CA.
- 2017 Invited Case Study at University of Chicago's DSSG. September 2017. Chicago, IL.

Teaching Experience

- 2017 – 2019 **Carnegie Mellon University**, *Teaching Assistant*.
- S19 18-661 (Machine Learning for Engineers - Masters) taught by Gauri Joshi
- F18 10-701 (Machine Learning - PhD) taught by Ziv Bar-Joseph and Pradeep Ravikumar
- S18 15-388/15-688 (Practical Data Science) taught by Zico Kolter
- F17 15-122 (Principles of Imperative Computation) taught by Illiano Cervesato
- S17 15-110 (Principles of Computing) taught by Margret Reid-Miller

Service

- Organizer ICML Workshop on Human Interpretability (2020)
- Reviewer NeurIPS (2019-2020), ICML (2019-2020)
- PC Member ACM Conference on AI and Finance (2020), ICLR Workshop on Debugging Machine Learning Models (2019), AAAI/ACM Conference on AI, Ethics and Society Student Programs (2019)

Other Experience

- 2020 – now **Credo AI**, *Consulting Research Scientist*, Palo Alto, CA.
Creating an AI auditing platform - in stealth
- 2018 – 2020 **.406 Ventures**, *Student Fellow*, Boston, MA.
Sourced startups and performed first-round due diligence on ventures
- 2018 – 2020 **MERAT**, *Co-Founder*, Seattle, WA.
Started a non-profit to help corporations adopt AI responsibly
- 2017 – 2019 **NavTalent (now HumanCapital)**, *Campus Director*, San Francisco, CA.
Connected top-tier engineers with high-growth, impact-driven startups
- 2011 – 2019 **BAPS Children's Activities**, *National Development Committee*, USA.
Planned and oversaw nation-wide conventions and weekly assemblies on Hinduism for over 5,000 children, ages 6-14, with the team of fifteen other volunteers
- 2017 – 2018 **Percepsense**, *Co-Founder*, Pittsburgh, PA.
Built products to harvest vehicular telematics data – pipeline now used by **Honda Motors**
- 2018 **Microsoft**, *Program Management Intern*, Redmond, WA.
Project: explainable conversational agents for technical hardware documentation
- 2017 **Groupon**, *Product Management Intern*, Chicago, IL.
Project: personalized and targeted pricing algorithms to drive purchase frequency
- 2016 **InquisitHealth**, *Software Engineering Intern*, New York, NY.
Project: speaker diarization in medical conversations and adverse event detection in patient SMS

Skills

- Programming Python, Java, C, C#, R, Javascript, Tensorflow, PyTorch, Matlab, HTML/CSS
- Coursework Advanced Probabilistic Machine Learning (CAM), Machine Learning (CMU), Advances in AI for Social Good (CMU), Network Science (CMU), Pattern Recognition Theory (CMU)
- Languages English (native), Gujarati (fluent), and Spanish (proficient)