

Ramaravind Kommiya Mothilal

Data Scientist at Everwell Health Solutions

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Education

Feb 2018 Sep 2016	Katholieke Universiteit Leuven (KU Leuven) MSc in Artificial Intelligence > Percentage: 76.81% (Magna Cum Laude) > Thesis: Statistical Modeling of Students' Performance in an Open-Admission Bachelor Program in Flanders - The need to discriminate between explanatory and predictive modeling [🔗]	Leuven, Belgium
May 2015 July 2011	National Institute of Technology (NIT) Trichy Bachelor in Instrumentation and Control Engineering > CGPA: 8.1/10 (First Class)	Tiruchirappalli, India

Experience

Present Mar 2021	Everwell Health Solutions Data Scientist Mentor: <i>Dr. Bill Thies</i> > Designing a systematic data hygiene framework to anticipate and remove sources of data bias in downstream ML tasks. > Developing indicators to evaluate and improve engagement of health providers to facilitate patient adherence to medications.	Bangalore, India
Feb 2021 Jan 2019	Microsoft Research Center for Societal Impact through Cloud & AI [🔗] AI Center Fellow Advisors: <i>Dr. Amit Sharma, Dr. Joyojeet Pal</i> > Developed a general optimization framework—DiCE(Diverse Counterfactual Explanations)—to generate and evaluate a diverse set of hypothetical examples that show people how to obtain a different prediction. [FAccT'20] [🔗] [🔗] > Studied the complementarities of Feature Attribution and Counterfactual explanation methods to demonstrate the value of considering multiple kinds of model explanations. [AIES'21] > Studied how occupying (un)favourable positions in the politicians' social networks lead to discrimination and inequality in terms of both information received and propagation of new information, and showed how caste and celebrity capital manifest in social media activities of Indian politicians. [CSCW'21]	Bangalore, India
Dec 2020 July 2018	Microsoft Research Technology for Emerging Markets [🔗] Research Intern Advisors: <i>Dr. Amit Sharma</i>	Bangalore, India
Jul 2016 Jul 2015	Royal Bank of Scotland (RBS) Data Archival Team Analyst	Chennai, India
Jul 2014 May 2014	Indian Institute of Science Computational Intelligence Lab [🔗] Research Intern Advisors: <i>Dr. S N Omkar</i>	Bangalore, India

Publications

P=In Press, C=Conference, W=Workshop, D=Demo/Poster, J=Journal

- [P.2] **Social Media Networks As A Window Into Caste Capital: A Formal Network Analysis Of Caste Relations Among Indian Politicians On Twitter**
Ramaravind Kommiya Mothilal*, Palashi Vaghela*, Joyojeet Pal (* = Equal Contribution)
Proceedings of the ACM on Human-Computer Interaction (in-press) (CSCW) [CSCW'22]
- [P.1] **Voting with the stars: Analyzing Partisan Engagement between Celebrities and Politicians in India**
Ramaravind Kommiya Mothilal, Dibyendu Mishra, Sachita Nishal, Faisal M. Lalani, Joyojeet Pal
Proceedings of the ACM on Human-Computer Interaction (in-press) (CSCW) [CSCW'22]
- [C.8] **Towards unifying feature attribution and counterfactual explanations: Different means to the same end** [🔗]
Ramaravind Kommiya Mothilal, Divyat Mahajan, Chenhao Tan, Amit Sharma
Proceedings of the 2021 AAAI/ACM Conference on AI, Ethics, and Society, 652-663 [AIES'21]
- [C.7] **Birds of a Caste-How Caste Hierarchies Manifest in Retweet Behavior of Indian Politicians** [🔗]
Palashi Vaghela*, Ramaravind Kommiya Mothilal*, Joyojeet Pal (* = Equal Contribution)
Proceedings of the ACM on Human-Computer Interaction [CSCW'21]

- [C.6] **Using Mobile Airtime Credits to Incentivize Learning, Sharing and Survey Response: Experiences from the Field** [🔗]
Devansh Mehta, [Ramaravind Kommiya Mothilal](#), Alok Sharma, William Thies, Amit Sharma
Proceedings of the 3rd ACM SIGCAS Conference on Computing and Sustainable Societies [COMPASS'20]
- [C.5] **Topical Focus of Political Campaigns and its Impact: Findings from Politicians' Hashtag Use during the 2019 Indian Elections** [🔗]
Anmol Panda, [Ramaravind Kommiya Mothilal](#), Monojit Choudhury, Kalika Bali, Joyojeet Pal
Proceedings of the ACM on Human-Computer Interaction [CSCW1'20]
- [C.4] **Learnings from Technological Interventions in a Low Resource Language: A Case-Study on Gondi** [🔗]
Sebastin Santy, Devansh Mehta, [Ramaravind Kommiya Mothilal](#), Brij Mohan Lal Srivastava, Alok Sharma, Anurag Shukla, Vishnu Prasad, Venkanna U, Amit Sharma and Kalika Bali
International Conference on Language Resources and Evaluation [Invited Submission @ LRE Journal] [LREC'20]
- [C.3] **Explaining machine learning classifiers through diverse counterfactual explanations** [🔗]
[Ramaravind Kommiya Mothilal](#), Amit Sharma, Chenhao Tan
Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency [FAccT'20]
- [C.2] **Optimizing peer referrals for public awareness using contextual bandits** [🔗]
[Ramaravind Kommiya Mothilal](#), Amulya Yadav, Amit Sharman
Proceedings of the 2nd ACM SIGCAS Conference on Computing and Sustainable Societies [COMPASS'19]
- [C.1] **Predicting first-year engineering student success: from traditional statistics to machine learning** [🔗]
[Ramaravind Kommiya Mothilal](#), Tom Broos, Maarten Pinxten, Tinne De Laet
Proceedings of the 46th SEFI Annual Conference 2018 [SEFI'18]
- [W.1] **Towards Unifying Feature Attribution and Counterfactual Explanations**
[Ramaravind Kommiya Mothilal](#), Divyat Mahajan, Chenhao Tan, Amit Sharma
Workshop on Responsible AI, ICLR-21 [Spotlight Contributed Talk] [RAI@ICLR'21]
- [D.3] **Facilitating Media Distribution with Monetary Incentives** [🔗]
Devansh Mehta, Alok Sharma, [Ramaravind Kommiya Mothilal](#), Anurag Shukla, Vishnu Prasad, William Thies, Venkanna U, Colin Scott, Amit Sharma
Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems [CHI'20]
- [D.2] **Learnings from an Ongoing Deployment of an IVR-based Platform for Voter Awareness** [🔗]
[Ramaravind Kommiya Mothilal](#), Devansh Mehta, Alok Sharma, William Thies, Amit Sharma
Conference Companion Publication of the 2019 on Computer Supported Cooperative Work and Social Computing [a non-archival version won Outstanding Poster Award at COMPASS 2019] [CSCW'19]
- [D.1] **The Appeal of Influencers to the Social Media Outreach of Indian Politicians** [🔗]
Faisal M Lalani, [Ramaravind Kommiya Mothilal](#), Joyojeet Pal
Conference Companion Publication of the 2019 on Computer Supported Cooperative Work and Social Computing [COMPASS'19]
- [J.1] **Scale adaptive object tracker with occlusion handling** [🔗]
[Ramaravind Kommiya Mothilal](#), TR Shravan, SN Omkar
International Journal of Image, Graphics and Signal Processing [IJIGSP'16]

Mentions and Coverages

- > “Dalit MPs less likely to be heard on Twitter than upper castes” | [The Times of India](#) Oct 2020
- > “Birds of Brahmanical Feather Flock Together” | [The Wire](#) Aug 2020
- > “DiCE: Diverse Counterfactual Explanations for Hotel Cancellations” | [Towards Data Science](#) Jul 2020
- > “DiCE -ML models with counterfactual explanations for the sunk Titanic-” | [Analytics Vidhya](#) Mar 2020
- > “Open-source library provides explanation for machine learning through diverse counterfactuals” | [Microsoft Research Blog](#) Jan 2020
- > “Elections 2019: What tweet for tat tells you about Rahul Gandhi” | [LiveMint](#) Apr 2019

Software and Open-Source Contribution

- > DiCE: Diverse Counterfactual Explanations for Machine Learning : Microsoft Research India - [commits](#), [repository](#)

Talks

“When Machine Learning meets Educational Science”

- › Faculty of Psychology and Educational Sciences, KU Leuven Feb 2018
- › Leuven Engineering and Science Education Center (LESEC) Mar 2018

Academic Service and Volunteering

Reviewer & PC COMPASS’22, COMPASS’21, XKDD’21

Reviewer ICLR-RAI’21 (Demo)

Section Leader *Code in Place* by Stanford University

References

- › Dr. Amit Sharma *Principal Researcher, Microsoft Research India* [✉]
- › Prof. Joyojeet Pal *Associate Professor, University of Michigan* [✉]
- › Dr. Bill Thies *Senior Principal Researcher, Microsoft Research India* [✉]
- › Prof. Chenhao Tan *Assistant Professor, University of Chicago* [✉]
- › Prof. Tinne De Laet *Associate Professor, Katholieke Universiteit Leuven (KU Leuven)* [✉]