

Maria De-Arteaga

CONTACT INFORMATION	Austin, TX dearteaga@mcombs.utexas.edu mariadearteaga.com
CURRENT APPOINTMENT	University of Texas at Austin Austin, TX, USA July 2020 – Present <i>Assistant Professor</i> Information, Risk, and Operations Management Department McCombs School of Business
EDUCATION	Carnegie Mellon University Pittsburgh, PA, USA Aug 2014 – May 2020 <i>Ph.D., Machine Learning & Public Policy</i> — Doctoral Dissertation: <i>Machine Learning in High-Stakes Settings: Risks and Opportunities</i> — Advisors: Alexandra Chouldechova & Artur Dubrawski Carnegie Mellon University Pittsburgh, PA, USA Aug 2014 – May 2017 <i>Master of Science, Machine Learning</i> Universidad Nacional de Colombia Bogota, Colombia Aug 2008 – Aug 2013 <i>Bachelor of Science, Mathematics</i> Universidad Autónoma de Madrid Madrid, Spain Jan 2012 – Dec 2012 <i>Exchange student</i>
SELECTED PUBLICATIONS	M. De-Arteaga* , R. Fogliato*, and A. Chouldechova. <i>A case for humans-in-the-loop: decisions in the presence of erroneous algorithmic scores</i> . In Proceedings of ACM CHI Conference on Human Factors in Computing Systems (CHI), 2020. (*Indicates equal contribution) R. Fogliato*, M. De-Arteaga* , and A. Chouldechova. <i>Lessons from the deployment of an algorithmic tool in child welfare</i> . Fair & Responsible AI Workshop, CHI, 2020. (*Indicates equal contribution) A. Romanov, M. De-Arteaga , H. Wallach, J. Chayes, C. Borgs, A. Chouldechova, S. Geyik, K. Kenthapadi, A. Rumshisky, A. Kalai, <i>Whats in a name? Reducing bias in bios without access to protected attributes</i> , In Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2019. Best Thematic Paper . M. De-Arteaga , A. Romanov, H. Wallach, J. Chayes, C. Borgs, A. Chouldechova, S. Geyik, K. Kenthapadi, A. Kalai, <i>Bias in Bios: A Case Study of Semantic Representation Bias in a High-Stakes Setting</i> , In Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FAT*), 2019. N. Swinger*, M. De-Arteaga* , N. Heffernan IV, M. Leiserson, A. Kalai, <i>What are the biases in my word embedding?</i> , In Proceedings of the AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES), 2019. (*Indicates equal contribution) M. De-Arteaga , J. Chen, P. Huggins, J. Elmer, G. Clermont, A. Dubrawski, <i>Predicting Neurological Recovery with Canonical Autocorrelation Embeddings</i> , PLoS ONE, 2019. M. De-Arteaga , A. Dubrawski, A. Chouldechova, <i>Learning under selective labels in the presence of expert consistency</i> , Workshop on Fairness, Accountability, and Transparency in Machine Learning (FAT/ML), ICML, 2018. M. De-Arteaga , W. Herlands, D. Neill, A. Dubrawski, <i>Machine Learning for the Developing World</i> , ACM Transactions on Management Information Systems, 2018. M. De-Arteaga , A. Dubrawski, <i>Discovery of Complex Anomalous Patterns of Sexual Violence in El Salvador</i> , Data for Policy, 2016. 1st Place Innovation Award on Data Science . W. Herlands, M. De-Arteaga , D. Neill, A. Dubrawski, <i>Lass0: Sparse Non-Convex Regression by Local Search</i> , Workshop on Optimization for Machine Learning, NIPS, 2015.

M. De-Arteaga, I. Eggel, C. Kahn, H. Müller, *Analyzing Image Search Behaviour of Radiologists: Semantics and Prediction of Query Results*, Journal of Digital Imaging, 2015.

M. De-Arteaga, I. Eggel, B. Do, D. Rubin, C. Kahn Jr. H. Müller, *Comparing Image Search Behaviour in the ARRS GoldMiner Search Engine and a Clinical PACS/RIS*, Journal of Biomedical Informatics, 2015.

AWARDS

- *EECS Rising Stars*, 2019.
- *Best Thematic Paper Award*, Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2019.
- *Microsoft Research Dissertation Grant*, 2018.
- *1st Place Innovation Award on Data Science*, Data for Policy, 2016.
- *Best Student Presentation Award*, Domestic Nuclear Detection Office (DNDO) Academic Research Initiative Grantees Conference, 2015.
- 2nd place *Premio ¡Investiga! 2019*, an award for Colombian investigative journalism.
- *Grado de Honor*, Universidad Nacional de Colombia, 2013.

WORK EXPERIENCE

Early SAS Bogota, Colombia **Apr 2017 – Oct 2019**
Co-founder & CTO
Social entrepreneurship focused on data-driven investigative journalism in Colombia.

Microsoft Research Cambridge, MA, USA **May 2018 – Aug 2018**
Research intern

Microsoft Research Redmond, WA, USA **May 2017 – Aug 2017**
Research intern

Haute École Spécialise de Suisse Occidentale Sierre, Switzerland **Jun 2014 – Aug 2014**
Research intern

Quantil SAS Bogota, Colombia **Aug 2013 – Jun 2014**
Junior researcher

Connectas Bogota, Colombia **Mar 2012 – Jun 2012**
Investigative journalist

Publicaciones Semana - Especiales Regionales Bogota, Colombia **Aug 2010 – Dec 2011**
Journalist

TEACHING EXPERIENCE

Universidad de los Andes Bogota, Colombia **Summer 2017**
Visiting Instructor, Intelligent Systems Architectures

Carnegie Mellon University Pittsburgh, PA, United States **Fall 2016**
Teaching Assistant, Data Mining (95-791)

Carnegie Mellon University Pittsburgh, PA, United States **Spring 2016**
Teaching Assistant, Machine Learning (10-601)

Colombian Mathematical Olympiad (OCM) Bogota, Colombia **Jan 2010 – Aug 2010**
Instructor (number theory and combinatorics)

INVITED TALKS

2020
Facebook (*Keynote*, Responsible NLP Summit), WIDS Bogota (*Keynote*), Australian National University (Data, AI, and Society Seminar Series), FUDAPROMAT Panama, University of San Francisco (Data Ethics Seminar, cancelled due to COVID-19), UT Austin Conference on the Ethics of AI (cancelled due to COVID-19), Cornell Information Science (Department Colloquia), Cornell Policy Analysis Management (Department Seminar), UC Santa Barbara (CS Department Seminar), Microsoft Research New England (MSR Seminar).

2019

UT Austin (IROM Department Seminar), University of Pittsburgh (Katz Department Seminar), CMU Software Engineering Institute (Lecture Series), FERIA DigiTech, IBM Research Africa (Africa Labs Deep Dive), Carnegie Mellon University (*Invited lecturer*, Computational Ethics in NLP course).

2018

INFORMS (Fairness and Transparency in Applied Operations Session), AMS Sectional Meeting (Special Session on Social Change In and Through Mathematics and Education), Google (Fairness in ML Workshop), Office of the Attorney General of Colombia (Lecture Series), UNESCO (*Closing Keynote*, Tech4Dev Conference, Data Science and Machine Learning for Development and Humanitarian Action Session), EPFL (CS Department Seminar), Google (Women in Tech Summit).

2017

Allegheny County Department of Human Service (DHS Speaker Series).

SELECTED PRESS *Consulted as expert*

- Quartz - *In a facial recognition bill backed by Microsoft, three words stand between citizens and their civil rights.*
- CNN - *Think your mask makes you invisible to facial recognition? Not so fast, AI companies say.*
- Quartz - *Amazon and Microsoft pause police facial recognition and demand regulation.*
- Quartz - *The influential project that sparked the end of IBM's facial recognition program.*
- The New York Times - *Many Facial-Recognition Systems Are Biased, Says U.S. Study.*
- New Scientist - *All-Seeing Eyes: The Epic Plan to Track Almost Everything on Earth.*

About my work

- Motherboard (Vice) - *Algorithms Have Nearly Mastered Human Language. Why Can't They Stop Being Sexist?*
- VentureBeat - *Researchers Expose Biases in Datasets Used to Train AI Models.*
- Microsoft Research blog - *What are the Biases in my Data?*
- Microsoft Research blog - *Microsoft Research to Present Latest Findings on Fairness in Socio-technical Systems at FAT* 2019.*
- SciDev - *Machine Learning Targets Development Problems.*
- ZettaBytes (EPFL) - *Principles for Effective Machine Learning for Developing Countries.*
- Quartz - *The most impactful AI research isn't happening in Silicon Valley.* (Features ML4D Workshop)
- Connectas - *Patrones matemáticos que ayudan a hacer mejor periodismo.*

PROFESSIONAL SERVICE

Organizer

- Co-founder and co-organizer, Workshop series *Machine Learning for the Developing World (ML4D)* (NeurIPS 2017-2019).
- Co-organizer and program lead, CVPR Workshop *Computer Vision for Global Challenges* (2019).
- Co-founder and co-organizer FAT* reading group at Carnegie Mellon University.
- Co-founder and co-organizer Machine Learning for the Developing World (ML4D) reading group at Carnegie Mellon University.

Program committee

MD4SG 2020, AIES 2020, FAT* 2019.

Reviewer

Management Science, CSCW 2020, Journal of Digital Imaging (2016-2018), WiML NeurIPS 2017.

PROGRAMMING

Python, R, Matlab, L^AT_EX.