Eaman Jahani

MIT Institute for Data, Systems, and Society
MIT Center for Statistics and Data Science

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Research Interests

I am interested in micro-level processes and structural factors such as information sharing in social networks or institutional settings that exacerbate existing inequalities. To this end, I use computational techniques and causal inference in networks, develop new network structure models and design online lab experiments to study how networks affect inequality and economic outcomes.

Areas of Specialisation

Statistics, Network Science, Social Networks, Experiment Design, Causal Inference

Professional Experience

2020-Present Facebook, Boston

Consulting Researcher, Core Data Science
January 2020 - Present

2011-2015 Google, New York

Software Engineer, AdWords
July 2011 - November 2014

2011-2011 Microsoft Research, Redmond

Research Intern, Databases
May 2011 - July 2011

Education

Massachusetts Institute of Technology, Cambridge

PhD Candidate at Institute for Data, Systems and Society, *PhD in Social and Engineering Systems*
PhD Candidate at Statistics and Data Science Center, *Interdisciplinary PhD in Statistics*
Thesis title: *Network Effects on Outcomes and Unequal Distribution of Resources*
Advisors: Alex 'Sandy' Pentland, Dean Eckles
September 2015 - Present

University Of Michigan, Ann Arbor

BSc and MSc in Computer Science
September 2005 - July 2011

Research

Working Papers

- *The Network Structure of Unequal Diffusion*
  Eaman Jahani, Dean Eckles, Alex "Sandy" Pentland
- *Tie Strength and Length in Social Capital: Evidence from Charitable Fundraising*
  Eaman Jahani, Michael C. Bailey, Dean Eckles
- *Formation of Long Ties and their Economic Outcomes*
  Eaman Jahani, Michael C. Bailey, Dean Eckles
- *Rivalrous Resource Sharing in Networks can Exacerbate Existing Inequalities*
  Eaman Jahani, Dean Eckles
- *Social Debunking of Misinformation on WhatsApp: The Case for Strong and In-group Ties*
  Irene Pasquetto, **Eaman Jahani**, Matthew Baum

Under Review

- *Exposure to Common Enemies can Increase Political Polarization: Evidence from an Experiment with Automated Partisans*
  Eaman Jahani, Natalie Gallagher, Friedolin Merhout, Nicolo Cavalli, Douglas Guilbeault, Yan Leng, Christopher A. Bail

Publication (refereed)

- Xiaowen Dong*, Alfredo J. Morales*, **Eaman Jahani***, Esteban Moro, Bruno Lepri, Burcin Bozkaya, Carlos Sarraute, Yaneer Bar-Yam, Alex "Sandy" Pentland, *Segregated Interactions in Urban and Online Spaces*, EPJ Data Science, 2020
- Matthew J. Salganik in Mass Collaboration with 111 Authors, *Measuring the predictability of life outcomes with a scientific mass collaboration*, Proceedings of the National Academy of Sciences, 2020
- Daniel E Rigobon, **Eaman Jahani**, Yoshihiko Suhara, Khaled AlGhoneim, Abdulaziz Alghunaim, Abdullah Almaatouq, *Winning Models for Grade Point Average, Grit, and Layoff in the Fragile Families Challenge*, Socius: Sociological Research for a Dynamic World, 2019
- **Eaman Jahani**, Peter M. Krafft, Yoshihiko Suhara, Esteban Moro, Alex "Sandy" Pentland, *ScamCoins, S*** Posters, and the Search for the Next Bitcoin^{TM}: Collective Sensemaking in Cryptocurrency Discussions*, Proceedings of the ACM on Human-Computer Interaction -CSCW, 2018
- **Eaman Jahani**, Pål Sundsøy, Johannes Bjelland, Linus Bengtsson, Alex "Sandy" Pentland, Yves-Alexandre de Montjoye, *Improving official statistics in emerging markets using machine learning and mobile phone data*, EPJ Data Science, 2017

- **Eaman Jahani**, Michael J. Cafarella, Christopher Ré. *Automatic Optimization for MapReduce Programs*, VLDB, 2011.

Publication (lightly refereed)

- **Eaman Jahani**, Guillaume Saint-Jacques, Pål Sundsøy, Johannes Bjelland, Esteban Moro, Alex "Sandy" Pentland, *Differential Network Effects on Economic Outcomes: A Structural Perspective*, International Conference on Social Informatics, 2017
- Pål Sundsøy, Johannes Bjelland, Bjørn-Atle Reme, Asif M Iqbal, **Eaman Jahani**, *Deep learning applied to mobile phone data for individual income classification*, International Conference on Artificial Intelligence: Technologies and Applications, 2016
- **Eaman Jahani***, Xiaowen Dong*, Alfredo Morales-Guzman, Burçin Bozkaya, Alex Pentland, *Purchase patterns, socioeconomic status, and political inclination*, World Bank Economic Review, 2016

Honors and Awards

NSF Graduate Research Fellowship 2015-2018
Software Engineering Promotion, Google 2013
Dean's List and James B. Angell Scholar, University of Michigan 2009

Recent Talks

- *Exposure to Common Enemies can Increase Political Polarization: Evidence from an Experiment with Automated Partisans*, Conference on Digital Experimentation (CODE), Boston, 2020
- *Network Structure of Unequal Diffusion*, International Conference of Computational Social Science, Boston, 2020
- *The Role of Social Ties in Debunking False Claims*, International Conference of Computational Social Science, Boston, 2020
- *Collective Sensemaking in Online Groups: The case of Cryptocurrency Discussions*, Sunbelt Conference, Montreal, 2019
- *ScamCoins, S*** Posters, and the Search for the Next Bitcoin^{TM}: Collective Sensemaking in Cryptocurrency Discussions*, CSCW Conference, New York, 2018
- *Differential Network Effects on Economic Outcomes: A Structural Perspective*, Network Science Conference, Paris, 2018
- *Differential Network Effects on Economic Outcomes: A Structural Perspective*, International Conference of Computational Social Science, Cologne, 2017
- *Bubbles and Network Structure: a study in cryptocurrencies*, International Conference of Computational Social Science, Helsinki, 2015

Service

Organizing

- *Summer Institute for Computational Social Science, Partner Site*, Boston, 2019

Reviewing
Social Forces (2020), IC2S2 (2020), ICIS (2018), Netmob (2016)

Technical Skills

R, Python, C++, C, Java, UNIX shell scripting, SQL, Presto, Spark, PHP

Last updated: October 5, 2021