

Piotr Sapiezynski, PhD

I am a data scientist with experience in international, interdisciplinary teams. I use statistics and machine learning to derive insights about behaviors of people and systems, analyze networks, and audit black-box algorithms with an emphasis on privacy, transparency, and fairness.

Experience

ASSOCIATE RESEARCH SCIENTIST, NORTHEASTERN UNIVERSITY; BOSTON, MA, USA – 2019-PRESENT

I continue my postdoctoral work on algorithmic auditing and teach data science.

POSTDOCTORAL RESEARCHER, NORTHEASTERN UNIVERSITY; BOSTON, MA, USA – 2017-2019

I worked on fairness in machine learning and privacy with Prof. Alan Mislove and Prof. Christo Wilson. Our research on Facebook shadow profiles has been covered in BBC, Gizmodo, TechCrunch, and others.

POSTDOCTORAL RESEARCHER, TECHNICAL UNIVERSITY OF DENMARK – 2016-2017

I advised graduate students' theses on mobility and network analysis. Our work on mobility constraints was covered in The Economist, Scientific American, and others. Our work on social bots was covered in Mother Jones and EurekAlert!, and others.

PHD CANDIDATE, TECHNICAL UNIVERSITY OF DENMARK – 2013-2016

I had major contributions in designing, building, and deploying a large scale computational social science study - the Copenhagen Networks Study. We collected high resolution behavioral data from 1000 students using smartphones, online questionnaires, and APIs to online social networks. Our work on Android privacy was covered in The Atlantic, Computer World, and others, as well as referred to in related court cases and patents. Our work on deploying computational social science experiments was covered in Forbes, New Scientist, Die Zeit, and others.

INDEPENDENT DATA COLLECTION CONSULTANT – 2015-2016

I designed and implemented an online surveying platform which was then used by the researchers at Copenhagen University to study the effects of computer games on children.

RESEARCH ASSISTANT, TECHNICAL UNIVERSITY OF DENMARK – 2011-2013

I developed mobile apps for Android (Java) and Symbian (C++) for research projects on epilepsy (reading EEG signals) and social networks.

STUDENT TEST ENGINEER, OTICON A/S – 2011-2013

I developed Android apps for personalized hearing aids. I created a test automation framework interfacing proprietary hardware, smartphones, and feature phones (MATLAB). I wrote control software for a robot used in auditory tests as well as used signal processing to report the test results.

Education

Technical University of Denmark – PhD in Network Science, 2016

Technical University of Denmark – MSc in Digital Media Engineering (w/ Honors), 2013

Warsaw University of Technology – BSc in Radiocommunication and Multimedia, 2010

Selected publications and preprints

See full list at <https://scholar.google.com/citations?user=3UZwE6sAAAAJ>

- *Discrimination through optimization: How Facebook's ad delivery can lead to skewed outcomes*, M Ali, P Sapiezynski, M Bogen, A Korolova, A Mislove, A Rieke, CSCW, (2019)
- *Auditing Offline Data Brokers via Facebook's Advertising Platform*, G Venkatadri, P Sapiezynski, E Redmiles, A Mislove, O Goga, M Mazurek, K Gummadi, The Web Conference, (2019)
- *Quantifying the Impact of User Attention on Fair Group Representation in Ranked Lists*, P Sapiezynski, W Zeng, RE Robertson, A Mislove, C Wilson, The Web Conference Companion, (2019)
- *Evidence for a conserved quantity in human mobility*, L Alessandretti, P Sapiezynski, V Sekara, S Lehmann, A Baronchelli, Nature Human Behavior, (2018)
- *Investigating sources of PII used in Facebook's targeted advertising*, G Venkatadri, E Lucherini, P Sapiezynski, A Mislove, PoPETS, (2018)
- *Academic performance prediction in a gender-imbalanced environment*, P Sapiezynski, V Kassarnig, C Wilson, S Lehmann, A Mislove, FATREC Workshop at RECSYS, (2017)
- *Inferring Person-to-person Proximity Using WiFi Signals*, P Sapiezynski, A Stopczynski, DK Wind, J Leskovec, S Lehmann, Proc. ACM IMWUT, (2017)
- *Evidence of Complex Contagion of Information in Social Media: An Experiment Using Twitter Bots*, B Monsted, P Sapiezynski, E Ferrara, S Lehmann, PLOS ONE, (2017)
- *Opportunities and Challenges in Crowdsourced Wardriving*, P Sapiezynski, R Gatej, A Mislove, S Lehmann, Proceedings of the 2015 ACM Conference on Internet Measurement Conference, (2015)
- *Tracking Human Mobility using WiFi signals*, P Sapiezynski, A Stopczynski, R Gatej, S Lehmann, PLOS ONE, (2015)
- *Measuring large-scale social networks with high resolution*, A Stopczynski, V Sekara, P Sapiezynski, A Cuttone, MM Madsen, JE Larsen, S Lehmann, PLOS ONE, (2014)
- *Measuring personalization of web search*, A Hannak, P Sapiezynski, AM Kakhki, B Krishnamurthy, D Lazer, A Mislove, C Wilson, WWW (2013)

Service

I have reviewed for Nature Scientific Data, PLOS ONE, EPJ Data Science, WWW '14 & '16, SocInfo '14, ICWSM '15, WebSci '15, CompleNet '17 & '18, FAT* Conference '18, CSCW '18. I have served as a program committee member for ICWSM '16 - '19 and SocInfo 2019.