The role of gender in social network organization

The role of gender in social network organization

The digital traces we leave behind when engaging with the modern world offer an interesting lens through which we study behavioral patterns as expression of gender. Although gender differentiation has been observed in a number of settings, the majority of studies focus on a single data stream in isolation. Here we use a dataset of high resolution data collected using mobile phones, as well as detailed questionnaires, to study gender differences in a large cohort. We consider mobility behavior and individual personality traits among a group of more than 800 university students. We also investigate interactions among them expressed via person-to-person contacts, interactions on online social networks, and telecommunication. Thus, we are able to study the differences between male and female behavior captured through a multitude of channels for a single cohort. We find that while the two genders are similar in a number of aspects, there are robust deviations that include multiple facets of social interactions, suggesting the existence of inherent behavioral differences. Finally, we quantify how aspects of an individual's characteristics and social behavior reveals their gender by posing it as a classification problem. We ask: How well can we distinguish between male and female study participants based on behavior alone? Which behavioral features are most predictive?

General information

State: Published
Organisations: Department of Applied Mathematics and Computer Science, Cognitive Systems, Technical University of Denmark
Contributors: Psyilla, I., Sapiezynski, P., Mones, E., Jørgensen, S. L.
Number of pages: 21
Publication date: 2017
Peer-reviewed: Yes

Publication information

Journal: PLoS One
Volume: 12
Issue number: 12
Article number: e0189873
ISSN (Print): 1932-6203
Ratings:
BFI (2019): BFI-level 1
Web of Science (2019): Indexed yes
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 3.01 SJR 1.164 SNIP 1.111
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.11 SJR 1.236 SNIP 1.101
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 3.32 SJR 1.427 SNIP 1.136
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 3.54 SJR 1.559 SNIP 1.148
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 3.94 SJR 1.772 SNIP 1.153
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 4.15 SJR 1.982 SNIP 1.156
Web of Science (2012): Impact factor 3.73
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 4.58 SJR 2.425 SNIP 1.233
Web of Science (2011): Impact factor 4.092