

Siqi Wu

Ann Arbor, MI, USA | siqiwu@umich.edu | <https://avalanchesiqi.github.io/>

RESEARCH SUMMARY

I aim to derive principles for responsible social systems, with my core expertise in large-scale quantitative analysis and collaboration with experts in social science, communication, and political science. I work towards my goal through a variety of methods – from curating large social media datasets, to modeling collective user behavior, to building algorithmic audit, to designing and testing new crowdsourcing systems.

PROFESSIONAL EXPERIENCE

Research Fellow | University of Michigan. Ann Arbor, MI, USA 2021.01 – present

- Center for Social Media Responsibility. Advisor: Paul Resnick

Projects include (1) measuring cross-partisan discussions on YouTube; (2) characterizing concept difference and (3) quantifying the impacts of annotator demographics in labeling hate, offensive, and toxic social media content; (4) calibrating prevalence estimation methods for online problematic speech; (5) designing effective training procedure for crowdsourced labeling; (6) auditing polarized recommendations in YouTube recommender system.

Research Fellow | Australian National University. Canberra, ACT, Australia 2020.09 – 2021.03

- Computational Media Lab. Advisor: Lexing Xie

Projects include (1) measuring collective human attention across different social platforms; (2) picturing global media consumption during COVID-19.

Software Engineer | MicroStrategy, Inc. Hangzhou, Zhejiang, China 2015.09 – 2016.05

- Big Data Engine team. Built Apache Spark alike engine to process massive data.

Software Developer Intern | Baidu, Inc. Beijing, China 2014.12 – 2015.02

- Baidu Maps team. Developed a tool to collect real time traffic status.

EDUCATION

Australian National University. Canberra, ACT, Australia 2016.06 – 2021.04

- PhD in Computer Science. Advisor: Lexing Xie

- Thesis: Measuring collective attention in online content: Sampling, engagement, and network effects

University of Melbourne. Melbourne, VIC, Australia 2013.07 – 2015.07

- Master of Information Technology. Advisor: Richard Sinnott

- Thesis: An architecture for big data processing and visualisation of traffic data

Tianjin University. Tianjin, China 2008.09 – 2012.06

- Bachelor of Electronics Engineering. Advisor: Yugong Wu

AWARDS

- AAAI ICWSM Best Senior Program Committee '22, '23

- AAAI ICWSM Spotlight Paper '21

- ACM CSCW Best Paper Honorable Mention '19

- Google PhD Fellowship '18

PUBLICATIONS

* Equal authorship

14. How to train your YouTube recommender to avoid unwanted videos
Liu, **Wu**, and Resnick. *ICWSM '24*. Full paper
13. The shapes of the fourth estate during the pandemic: Profiling COVID-19 news consumption in eight countries
Yang, Xie, and **Wu**. *CSCW '23*. Full paper
12. Prevalence estimation in social media using black box classifiers
Wu and Resnick. *ICWSM '23*. Tutorial
11. Just another day on Twitter: A complete 24 hours of Twitter data
Pfeffer et al. *ICWSM '23*. Dataset paper
10. Whose advantage? Measuring attention dynamics across YouTube and Twitter on controversial topics
Lee*, **Wu***, Ertugrul*, Lin, and Xie. *ICWSM '22*. Full paper
9. Cross-partisan discussions on YouTube: Conservatives talk to liberals but liberals don't talk to conservatives
Wu and Resnick. *ICWSM '21*. Full paper, **spotlight paper (top 8)**
8. AttentionFlow: Visualising influence in networks of time series
Shin*, Tran*, **Wu***, Mathews, Wang, Lyall, and Xie. *WSDM '21*. Demo paper
7. Unsupervised cyberbullying detection via time-informed Gaussian mixture model
Cheng, Shu, **Wu**, Silva, Hall, and Liu. *CIKM '20*. Full paper
6. Variation across scales: Measurement fidelity under Twitter data sampling
Wu, Rizioiu, and Xie. *ICWSM '20*. Full paper
5. Estimating attention flow in online video networks
Wu, Rizioiu, and Xie. *CSCW '19*. Full paper, **best paper honorable mention (top 5%)**
4. How is attention allocated? Data-driven studies of popularity and engagement in online videos
Wu. *WSDM '19*. Doctoral consortium
3. Beyond views: Measuring and predicting engagement in online videos
Wu, Rizioiu, and Xie. *ICWSM '18*. Full paper
2. Will this video go viral? Explaining and predicting the popularity of YouTube videos
Kong, Rizioiu, **Wu**, and Xie. *WWW '18*. Demo paper
1. SMASH: A cloud-based architecture for big data processing and visualization of traffic data
Wu, Morandini, Sinnott. *DSDIS '15*. Full paper

TEACHING

- Teaching assistant in ANU graduate course COMP6490 Document Analysis ('17, '18)
- Teaching assistant in ANU undergraduate course COMP1030 Art of Computing ('17)

STUDENTS

- Alexander Liu (UMich PhD)
- Zain Padamsee (Bowdoin College undergrad)
- Cai Yang (ANU undergrad) → Saarland University/Max Planck Institute

SERVICES

- ICWSM '23 poster, demo, and dataset track co-chair
- ICWSM '22 student volunteer and scholarship chair

- Senior program committee: ICWSM ('22 - '24)
- Conference program committee/reviewer: WebSci ('22 - '24), CSCW ('19 - '23), TheWebConf ('19, '20, '23), ICIS ('22, '23), IC2S2 ('23), CIKM ('23), ASONAM ('21, '22), ICWSM ('17, '18, '21), AAAI ('19)
- Ad hoc journal reviewer: EPJ Data Science, Collective Intelligence, Social Science Computer Review, ACM Transactions on Information Systems

MISC.

- Organizing: co-organized the Computational Media Lab winter workshop '19
- Running: 20 100+km events, 60+ (ultra) marathons finisher, 2:42 marathoner