

Julie Jiang

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I am interested in learning about **people**—how user preferences, social cues, and contextual factors influence and drive user behavior—in online settings such as **social media** and **multiplayer games**. I adopt a variety of deep learning, network analysis, natural language processing, and statistical methods.

Education

University of Southern California (USC) | Los Angeles, CA 2019–2024
PhD Candidate in Computer Science—GPA: 4.00/4.00 (expected)

Research interests: computational social science & machine learning

Advisor: Dr. Emilio Ferrara

- Qualifying Exam (Committee: Dr. Emilio Ferrara, Dr. Kristina Lerman, Dr. Xiang Ren, Dr. Salman Avestimehr, and Dr. Bistra Dilkina) Sep 2021

Tufts University | Medford, MA 2015–2019
BS in Computer Science and Mathematics—GPA 3.72/4.00 *magna cum laude*

Experience

Research Intern at TikTok/ByteDance | Virtual, CA Fall 2022

- Applied Machine Learning team

Research Intern at Snap Research | Santa Monica, CA Summer 2022

- Advised by Dr. Francesco Barbieri in the Computational Social Science Team
- Reciprocity, homophily and social network effects of Bitmoji stickers usage on Snapchat

Research Assistant at USC Information Sciences Institute (ISI) | Marina del Rey, CA 2021–2022

- **DARPA INCAS-UPSCALE** (PI: Dr. Emilio Ferrara): Universal population segmentation and characterization algorithms for online environments

Research Intern at Snap Research | Santa Monica, CA May–Nov 2021

- Advised by Dr. Francesco Barbieri in the Computational Social Science Team
- Analyzed the contextual impact (time, location, and weather) on sentiment expressed in Snapchat stories (paper published in ICWSM 2023)

Research Assistant at USC Information Sciences Institute (ISI) | Marina del Rey, CA 2019–2021

- **DARPA TAILOR-Bespoke** (PI: Dr. Kristina Lerman): Learning bespoke interventions for performance optimizations in heterogeneous users

Software Engineering Intern at Google | Mountain View, CA Summer 2019

- Adwords API Team

Research Assistant at Tufts University | Medford, MA 2018–2019

- Advised by Dr. Li-Ping Liu and Dr. Soha Hassoun
- Developed graph embedding models for biochemical molecular reaction prediction (paper published in Bioinformatics)

- Consumer electronics advanced development division
- Developed deep neural network to separate noise from audio signals

Publications * equal contribution

- 2023 **Julie Jiang**, Xiang Ren, and Emilio Ferrara. **Retweet-BERT: Characterizing Echo Chambers by Leveraging Language Features and Information Diffusion in Social Media**. To appear at *The International AAAI Conference on Web and Social Media (ICWSM '23)*. [Preprint](#)
- 2022 Alex Bisberg*, **Julie Jiang***, Yilei Zeng, Emily Chen, and Emilio Ferrara. **The Gift That Keeps on Giving: Generosity is Contagious in Multiplayer Online Games**. To appear at the *ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW '22)*. [Preprint](#)
- 2022 **Julie Jiang**, Nils Murrugarra-Llerena, Maarten W. Bos, Yozen Liu, Neil Shah, Leonardo Neves, and Francesco Barbieri. **Sunshine with a Chance of Smiles: Weather Impacts Expressed Sentiment on Social Media**. *The International AAAI Conference on Web and Social Media (ICWSM '22)*. [Paper](#)
- 2022 Emily Chen*, **Julie Jiang***, Ho-Chun Herbert Chang, Goran Murić, and Emilio Ferrara. **Charting the Information and Misinformation Landscape to Characterize Misinfodemics on Social Media: COVID-19 Infodemiology Study at a Planetary Scale**. *JMIR Infodemiology* 2022; 2(1):e32378. [Paper](#)
- 2021 **Julie Jiang**, Xiang Ren, and Emilio Ferrara. **Social Media Polarization and Echo Chambers in the Context of COVID-19: Case Study**. *JMIRx Med* 2021; 2(3):e29570. [Paper](#)
- 2021 Yuzi He, Christopher Tran, **Julie Jiang**, Keith Burghadt, Emilio Ferrara, Elena Zheleva, and Kristina Lerman. **Heterogeneous Effects of Software Patches in a Multiplayer Online Battle Arena Game**. *The International Conference on the Foundations of Digital Games (FDG '21)*. [Paper](#)
- 2021 **Julie Jiang**, Danaja Maldeniya, Kristina Lerman, and Emilio Ferrara. **The Wide, the Deep, and the Maverick: Types of Players in Team-based Online Games**. *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)*, 2021, 5, CSCW1 (**CSCW '21**). [Paper](#) [Video](#)
- 2020 **Julie Jiang**, Kristina Lerman, and Emilio Ferrara. **Individualized Context-Aware Embeddings for Online Games Predictions**. *20th IEEE International Conference on Data Mining (ICDM '20), Workshop on High Dimensional Data Mining*. [Paper](#) [arXiv](#)
- 2020 **Julie Jiang**, Emily Chen, Shen Yan, Kristina Lerman, and Emilio Ferrara. **Political Polarization Drives Online Conversations About COVID-19 in the United States**. *Human Behavior and Emerging Technologies* 2(3), 200—211, 2020. [Paper](#) [cited > 100 times]
- 2020 **Julie Jiang**, Li-Ping Liu, and Soha Hassoun. **Learning Graph Representations of Biochemical Networks and Its Application to Enzymatic Link Prediction**. *Bioinformatics* 37(6), 793—799, 2021. [Paper](#)

Preprints

- 2022 **Julie Jiang**, Mireia Triguero Roura, Maarten W. Bos, Ron Dotsch, Yozen Liu, Vítor Silva, and Francesco Barbieri. **Reciprocity, Homophily, and Social Network Effects in Pictorial Communication: A Case Study of Bitmoji Stickers**. Under Review.

- 2022 [Julie Jiang](#), Emily Chen, Luca Luceri, Goran Murić, Francesco Pierri, Ho-Chun Herbert Chang, and Emilio Ferrara. **What are Your Pronouns? Examining Gender Pronoun Usage on Twitter.** [Preprint](#)
- 2022 [Julie Jiang](#), Jesse Thomason, Francesco Barbieri, and Emilio Ferrara. **Geolocated Social Media Posts are Happier: Understanding the Characteristics of Check-in Posts on Twitter.** [Preprint](#)
- 2022 [Julie Jiang](#), Kristina Lerman, and Emilio Ferrara. **Zero-Shot Meta-Learning for Small-Scale Data from Human Subjects.** [Preprint](#)

Presentations

- 2022 [Julie Jiang](#), Nils Murrugarra-Llerena, Maarten W. Bos, Yozen Liu, Neil Shah, Leonardo Neves, and Francesco Barbieri. **Sunshine with a Chance of Smiles: Weather Impacts Expressed Sentiment on Social Media.** *2022 International Society for Research on Emotion (ISRE)*, oral presentation.
- 2020 Emily Chen*, [Julie Jiang*](#), Fred Morstatter, Kristina Lerman, and Emilio Ferrara. **Ageism in Traffic Policing.** *6th International Conference on Computational Social Science (IC2S2)*, oral presentation. [Extended Abstract](#)
- 2020 [Julie Jiang](#), Li-Ping Liu, and Soha Hassoun. **Enzymatic Link Prediction for Biochemical Route Synthesis.** *2020 MIT AI Powered Drug Discovery and Manufacturing (AIDM)*. [Poster](#)
- 2019 [Julie Jiang](#), Li-Ping Liu, and Soha Hassoun. **Predicting Reactions for Biochemical Networks Using Graph Embeddings.** *2019 Machine Learning in Computational Biology (MLCB)*, co-located with NeurIPS '19. [Poster](#)

Teaching

USC

Teaching Assistant, **CSCI591** CS Research Colloquium

Fall 2022

Tufts University

Teaching Fellow (Head TA), **COMP11** Intro to Computer Science

Spring 2018, Fall 2018, & Spring 2019

Teaching Assistant, **COMP105** Programming Languages

Spring 2018

Teaching Assistant, **COMP15** Data Structures

Spring 2017 & Fall 2017

Awards

USC Graduate School nomination for the Google PhD Fellowship	2021
USC Viterbi nomination for the Microsoft PhD Fellowship	2021
USC ISI Distinguished Graduate Student Research Fellowship	2019–2020
USC Viterbi Travel Grant for Graduate Engineering Preview Day	2019
Tufts Tisch Summer Scholars Fellowship	2019
Tufts University Dean's List (7/8 semesters)	2015–2019

Reviewing

- The ACM Web Conference (**TheWebConf**/WWW): 2020, 2021, 2023 (PC)
- The International AAAI Conference on Web and Social Media (**ICWSM**): 2022–2023
- The ACM Web Science Conference (**WebSci**): 2020–2022
- The ACM Conference on Human Factors in Computing Systems (**CHI**): 2023
- The ACM Conference on Computer-Supported Cooperative Work and Social Computing (**CSCW**): 2023

- International Journal of Communication (**IJoC**): 2022
- Conference for Truth and Trust Online (**TTO**): 2021
- International Conference on Complex Networks (**CompleNet**): 2020

Media Coverage

2021 Segregated communities of polarized Twitter users are shaping online conversations about COVID-19. *PsyPost.org*. [Link](#)