

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

BS in Computer Science and Mathematics—GPA 3.72/4.00 *magna cum laude* 2015—2019

Experience

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

- Applied Machine Learning team
- Analyzed how the hierarchical diversity of ads is related to user engagement

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 (paper under review)

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**, Jesse Thomason, Francesco Barbieri, and Emilio Ferrara. **Geolocated Social Media Posts are Happier: Understanding the Characteristics of Check-in Posts on Twitter**. To appear at *The ACM Web Science Conference (WebSci '23)*. [Preprint](#)
- 2023 **Julie Jiang**, Ron Dotsch, Mireia Triguero Roura, Yozen Liu, Vítor Silva, Maarten W. Bos, and Francesco Barbieri. **Reciprocity, Homophily, and Social Network Effects in Pictorial Communication: A Case Study of Bitmoji Stickers**. To appear at *The ACM CHI Conference on Human Factors in Computing Systems (CHI '23)*. [Preprint](#)
- 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 Alexander J. Bisberg*, **Julie Jiang***, Yilei Zeng, Emily Chen, and Emilio Ferrara. **The Gift That Keeps on Giving: Generosity is Contagious in Multiplayer Online Games**. *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)*, 2022, 6, CSCW2 (**CSCW '22**). [Paper](#) [arXiv](#)
- 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 Rebecca Dorn, Jeremy Abramson, [Julie Jiang](#), Kristina Lerman. **Gender and Expression in Online Interactions.**
- 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](#), 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 & Spring 2023

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

Grader, **MATH32** Calculus I and **MATH34** Calculus II

Spring 2017 & Fall 2017

Tutor, **MATH** Calculus

Fall 2016 & Spring 2017

Awards

Snap Research Fellowship (\$10K)	2022
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 (\$5K)	2019–2020
USC Viterbi Travel Grant for Graduate Engineering Preview Day	2019
Tufts Tisch Summer Scholars Fellowship	2019

Professional Service

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 Conference on Human Factors in Computing Systems (**CHI**): 2023

The ACM Conference on Computer-Supported Cooperative Work and Social Computing (**CSCW**): 2023

The ACM Web Science Conference (**WebSci**): 2020, 2021, 2022, 2023

International Journal of Communication (**IJoC**): 2022

Conference for Truth and Trust Online (**TTO**): 2021

International Conference on Complex Networks (**CompleNet**): 2020

Admissions

USC Viterbi CS PhD Admissions: 2021, 2022

Tufts Admissions Network: 2020, 2022

Media Coverage

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