Julie Jiang

juliejiang112@gmail.com | yioujian@usc.edu | Personal Website | Google Scholar

I am interested in learning about **people**—how user preferences, social cues, and external contextual factors influence and drive user behavior—in online settings such as **social media** and **multiplayer games.** I adopt a variety of deep learning, graph-based learning, natural language processing, and statistical methods to analyze the dynamics of human behavior.

Education

University of Southern California (USC) — Los Angeles, CA

PhD Candidate in Computer Science—GPA: 4.00/4.00 — 2019—2024

Research interests: computational social science & machine learning — (expected)

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

Bytedance, *Research Intern* — Mountain View, CA

- Incoming intern (Applied Machine Learning team) — Sep—Dec 2022

Snap Research, *Research Intern* — Virtual/Santa Monica, CA

- Advised by Dr. Francesco Barbieri in the Computational Social Science Team — May—Aug 2022
- Homophily and Contagion of Bitmoji Sticker Usage on Snapchat

USC Information Sciences Institute (ISI), *Research Assistant* — Marina del Rey, CA

- **DARPA INCAS-UPSCALE** (PI: Dr. Emilio Ferrara) — Aug 2021—May 2022
  Universal population segmentation and characterization algorithms for online environments

Snap Research, *Research Intern* — Virtual/Santa Monica, CA

- Advised by Dr. Francesco Barbieri in the Computational Social Science Team — May—Nov 2021
- Contextual impact (time, location, and weather) on expressed sentiment in Snapchat stories

USC Information Sciences Institute (ISI), *Research Assistant* — Marina del Rey, CA

- **DARPA TAILOR-Bespoke** (PI: Dr. Kristina Lerman) — Aug 2019—May 2021
  Learning bespoke interventions for performance optimizations in heterogeneous users

Google, *Software Engineering Intern* — Mountain View, CA

- Adwords API Team — May—Aug 2019

Tufts University, *Research Assistant*   Medford, MA
- Advised by Dr. Li-Ping Liu and Dr. Soha Hassoun   2018—2019
- Graph embedding models for biochemical molecular reaction prediction

Bose Corporation, *Software Engineering Intern*   Framingham, MA
- Consumer electronics advanced development division   Summer 2017

# Publications ** equal contribution*

2023 ICWSM	**Julie Jiang**, Xiang Ren, and Emilio Ferrara. **Retweet-BERT: Characterizing Echo Chambers by Leveraging Language Features and Information Diffusion in Social Media.** To appear in the *17th International AAAI Conference on Web and Social Media (ICWSM '23).* Preprint
2022 CSCW	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 in the *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)*, CSCW '22. Preprint
2022 ICWSM	**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 16th International AAAI Conference on Web and Social Media (ICWSM '22).* Paper
2022 JMIR	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 JMIR	**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 FDG	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 16th International Conference on the Foundations of Digital Games (FDG '21).* Paper
2021 CSCW	**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*.* Paper Video
2020 ICDMW	**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
2020 HBET	**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

Working Papers

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

2020   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

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

Professional Service

Reviewer	ICWSM	2022—2023
	International Journal of Communication (IJoC)	2022
	WebSci	2020—2022
	TheWebConf (WWW)	2020—2021
	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 |