

# Julie Jiang

Forbes 30 under 30 (Science)

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I study **computational social science**, developing ML techniques to empirically study human behavior on large-scale online platforms for **social good**. I am graduating (PhD) in early 2024 and seeking **full-time industry opportunities**.

## Education

### University of Southern California (USC)

PhD Candidate in Computer Science—GPA: 4.00/4.00

MS in Computer Science—GPA: 4.00/4.00

Dissertation: Socially-Informed Content Analysis of Online Human Behavior

Advisor: Dr. Emilio Ferrara

Los Angeles, CA

Aug 2019—May 2024

2023

### Tufts University

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

Medford, MA

2015—2019

## Industry Experience

### Spotify Research

Research Intern, Human in AI, Personalization

- Understanding of the consumption of new music releases from the perspective of genres (**WebSci 2024**)

Virtual

Summer 2023

### TikTok/ByteDance

Data Science Intern, Applied ML

- Impact of the hierarchical diversity of ads on user engagement and retention on Tiktok

Virtual

Fall 2022

### Snap Research

Research Intern, Computational Social Science

- The homophilous, reciprocal, and contagious use of Bitmojis on Snapchat (**CHI 2023**)
- Weather and impacts expressed sentiment on Snapchat stories (**ICWSM 2022**)

Santa Monica, CA

Summer 2022

May—Nov 2021

### Google

Software Engineering Intern, Adwords API

Mountain View, CA

Summer 2019

### Bose Corporation

Software Engineering Intern

Framingham, MA

Summer 2018

## Research Experience

### USC Information Sciences Institute (ISI)

Research Assistant

- DARPA INCAS-UPSCALE (PI: Dr. Emilio Ferrara): Universal population segmentation and characterization algorithms for online environments
- DARPA TAILOR-Bespoke (PI: Dr. Kristina Lerman): Learning bespoke interventions for performance optimizations in heterogeneous users

Marina del Rey, CA

2021—2024

2019—2021

### Tufts University

Research Assistant

- Graph embedding models for biochemical reaction prediction (Dr. Liping Liu and Dr. Soha Hassoun)

Medford, MA

2018—2019

## Publications \*equal contribution

### HIGHLIGHTS

- Published 14 first-authored papers (16 total publications)
- 360+ citations, H-index = 6
- Publish at top conferences (CHI, TheWebConf, ICWSM, CSCW) and journals (HBET, JMIR, Bioinformatics)

## CONFERENCES

- C10. Jinyi Ye, Luca Luceri, [Julie Jiang](#), and Emilio Ferrara. **Susceptibility to Unreliable Information Sources: Swift Adoption with Minimal Exposure.** To appear at *The Web Conference (TheWebConf '24)*. [Preprint](#)
- C9. [Julie Jiang](#), Aditiya Ponnada, Ang Li, Ben Lacker, and Samuel F. Way. **A Genre-Based Analysis of New Music Streaming at Scale.** To appear at the *ACM Web Science Conference (WebSci '24)*.
- C8. [Julie Jiang](#), Xiang Ren, and Emilio Ferrara. **Retweet-BERT: Political Leaning Detection Using Language Features and Information Diffusion on Social Networks.** In *Proceedings of the International AAAI Conference on Web and Social Media*, 17(1), 459-469 (ICWSM '23). [Paper](#)
- C7. [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.** In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23)*. [Paper](#)
- C6. [Julie Jiang](#), Jesse Thomason, Francesco Barbieri, and Emilio Ferrara. **Geolocated Social Media Posts are Happier: Understanding the Characteristics of Check-in Posts on Twitter.** In *Proceedings of the 15<sup>th</sup> ACM Web Science Conference (WebSci '23)*. [Paper](#) [arXiv](#)
- C5. [Julie Jiang](#), Kristina Lerman, and Emilio Ferrara. **Zero-Shot Meta-Learning for Small-Scale Data from Human Subjects.** *The 11<sup>th</sup> IEEE International Conference on Healthcare Informatics (ICHI '23)*. [Paper](#) [arXiv](#)
- C4. [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 16<sup>th</sup> International AAAI Conference on Web and Social Media, 2022 (ICWSM '22)*. [Paper](#)
- C3. 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.** In *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)*, 2022, 6, CSCW2 (CSCW '22). [Paper](#) [arXiv](#)
- C2. [Julie Jiang](#), Danaja Maldeniya, Kristina Lerman, and Emilio Ferrara. **The Wide, the Deep, and the Maverick: Types of Players in Team-based Online Games.** In *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)*, 2021, 5, CSCW1 (CSCW '21). [Paper](#) [Video](#)
- C1. Yuzei He, Christopher Tran, [Julie Jiang](#), Keith Burghardt, Emilio Ferrara, Elena Zheleva, and Kristina Lerman. **Heterogeneous Effects of Software Patches in a Multiplayer Online Battle Arena Game.** In *Proceedings of The 16<sup>th</sup> International Conference on the Foundations of Digital Games (FDG '21)*. [Paper](#)

## JOURNALS

- J4. 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](#)
- J3. [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](#)
- J2. [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 > 190 times]
- J1. [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](#)

## WORKSHOPS

- W1. [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.** In *Workshop Proceedings of the 17<sup>th</sup> International AAAI Conference on Web and Social Media (ICWSM '23)*. [Paper](#) [arXiv](#)

- W2. [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](#)

## PRESENTATIONS

5. Rebecca Dorn, Negar Mokherian, [Julie Jiang](#), Jeremy Abramson, Fred Morstatter, and Kristina Lerman. **Non-Binary Gender Expression in Online Interactions**. *16th International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRIMS '23)*. [Preprint](#)
4. [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.
3. 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](#)
2. [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](#)
1. [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](#)

## WORK-IN-PROGRESS

- [Julie Jiang](#), Luca Luceri, Joseph B. Walther, and Emilio Ferrara. **Social Approval and Network Homophily as Motivators of Online Toxicity**. [Preprint](#)
- [Julie Jiang](#) and Emilio Ferrara. **Social-LLM: Modeling User Behavior at Scale using Language Models and Social Network Data**. [Preprint](#)
- [Julie Jiang](#), Luca Luceri, and Emilio Ferrara. **Moral Values Underpinning COVID-19 Online Communication Patterns**. [Preprint](#)
- Rebecca Dorn, Negar Mokherian, [Julie Jiang](#), Jeremy Abramson, Fred Morstatter, and Kristina Lerman. **Non-Binary Gender Expression in Online Interactions**.
- Yulin Yu, [Julie Jiang](#), and Paramveer Dhillon. **Seeing the Forest for the Trees: Characterizing Online Conversations Structure Across Subreddits**.
- Mireia Triguero Roura, Maarten W. Bos, Francesco Barbieri, [Julie Jiang](#), Yozen Liu, and Ron Dotsch. **The Ties that Bind: Online Pictorial Communication Reveals Cultural Boundaries In the World**.

## Teaching

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### 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 & Honors

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Forbes 30 Under 30 (Science)	2024
USC PhD Achievement Award (\$5,000, awarded to 6 PhD students @ USC w/ exceptional academic profile)	2024
Phi Beta Kappa (Honor Society)	2024
ACM WebSci Student Travel Grant	2023
Snap Research Fellowship (\$10,000)	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 (\$5,000)	2019–2020
USC Viterbi Travel Grant for Graduate Engineering Preview Day	2019
Tufts Tisch Summer Scholars Fellowship	2018
Tufts University Dean's List	2015–2019

## Media Coverage

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USC Viterbi School of Engineering, 2024. [Julie Jiang Receives Honor as a 2024 Forbes 30 Under 30 in Science](#)  
 USC Information Sciences Institute, 2024. [Julie Jiang Receives Honor as a 2024 Forbes 30 Under 30 in Science](#)  
 The Conversation, 2023. [Online 'likes' for toxic social media posts prompt more – and more hateful – messages](#)  
 Phys.org, 2023. [Online 'likes' for toxic social media posts prompt more – and more hateful – messages](#)  
 New York Post, 2023. [Social media trolls are inspired by 'likes' — not hate: study](#)  
 Forbes, 2023. [Julie Jiang - 2024 30 Under 30 \(Science\)](#)  
 PsyPost, 2021. [Segregated communities of polarized Twitter users are shaping online conversations about COVID-19](#)

## Professional Service

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### Reviewing

The ACM Web Conference (**TheWebConf**/WWW): 2020, 2021, 2023, 2024  
 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 International AAAI Conference on Web and Social Media (**ICWSM**): 2022–2024  
 The ACM Web Science Conference (**WebSci**): 2020–2024  
 International Journal of Communication (**IJoC**): 2022  
 Conference for Truth and Trust Online (**TTO**): 2021  
 International Conference on Complex Networks (**CompleNet**): 2020  
**PLOS ONE**: 2023

### Mentoring

Jinyi Ye (MS @ USC Annenberg): 2023

### Admissions

USC Viterbi CS PhD Admissions: 2021, 2022  
 Tufts Admissions Network: 2020, 2022