Serina Chang

EDUCATION	Stanfo Ph.D.	ord University, Stanford, CA candidate, Computer Science	2019-2024 (expected)	
	Advise Colun B.A., 0 Advise GPA: 2	ed by Prof. Jure Leskovec and Prof. Johan Ugander nbia University , New York, NY Computer Science (major), Sociology (concentration), <i>magna cum laude</i> ed by Prof. Kathleen McKeown 3.97/4.00	2015-2019	
HONORS	Rising EECS Futur PhD H Best P Gradu The F Outsta Phi Bo Theod Acade King's Dean'	s Stars in Data Science, University of Chicago and University of California San E Rising Stars, Georgia Institute of Technology e Faculty Symposium Scholar, Cornell University Fellowship, Computational Social Science, Meta Paper Award, KDD 2021 (Applied Data Science Track) hate Research Fellowship, National Science Foundation inch Family Fellowship, Stanford University, School of Engineering anding Undergraduate Researcher Award, Computing Research Association eta Kappa, Columbia University lore R. Bashkow Award, Columbia University, Computer Science emic Excellence Award, Columbia University, Computer Science s Crown Leadership Award, Innovation and Enhancement, Columbia University s List (all semesters), Columbia University	Diego 2023 2023 2023 2021 2021 2019 2019 2019 2019 2019 2019 2019 2019 2019 2019 2019 2019 2019 2019 2019 2019 2019 2019 2015-2019 2015	
PAPERS	 *indicates co-first authorship. [†]indicates a student I mentored. [14] Generating social networks with large language models Alicja Chaszczewicz[†], Serina Chang, Emma Wang[†], Maya Josifovska[†], Emma Pierson, and Jure Leskovec Presenting at IC²S² 2024 as Plenary Talk (2.8% of submissions) 			
	[13]	Inferring dynamic networks from marginals with iterative proportional fitting Serina Chang*, Frederic Koehler*, Zhaonan Qu*, Jure Leskovec, and Johan Uga Under review at ICML 2024 Also presented at <i>Learning on Graphs</i> 2023	ınder	
	[12]	Accurate measures of vaccination and concerns of vaccine holdouts from web sea Serina Chang, Adam Fourney, and Eric Horvitz <i>Nature Communications</i> (accepted in principle) Also presented at KDD 2023 Workshop on Epidemiology Meets Data Mining and (oral); KDD 2023 Workshop on Data Science for Social Good (oral); IC ² S ² 2024	ırch logs l Knowledge Discovery (oral)	
	[11]	 [11] Estimating geographic spillover effects of COVID-19 policies from large-scale mobility networks Serina Chang, Damir Vrabac[†], Jure Leskovec, and Johan Ugander AAAI 2023 Also presented at KDD 2022 Workshop on Data-driven Humanitarian Mapping and Policymaking (oral); IC²S² 2022 		
	[10]	Computational analysis of 140 years of US political speeches reveals more popolarized framing of immigration Dallas Card, Serina Chang , Chris Becker, Julia Mendelsohn, Rob Voigt, Leah Bo and Dan Jurafsky <i>PNAS</i> 2022 Also presented at <i>Conference on New Directions in Analyzing Text as Data</i> (TAD	ositive but increasingly ustan, Ran Abramitzky, A) 2021 (oral)	

- [9] To recommend or not? A model-based comparison of item-matching processes Serina Chang and Johan Ugander ICWSM 2022 (oral) Also presented at IC²S² 2021 (oral)
- [8] Data-driven real-time strategic placement of mobile vaccine distribution sites Zakaria Mehrab, Mandy Wilson, Serina Chang, Galen Harrison, Bryan L. Lewis, Alex Tellionis, Justin Crowe, Dennis Kim, Scott Spillman, Kate Peters, Jure Leskovec, and Madhav Marathe IAAI 2022
- [7] Supporting COVID-19 policy response with large-scale mobility-based modeling

Serina Chang, Mandy Wilson, Bryan Lewis, Zakaria Mehrab, Komal K. Dudakiya, Emma Pierson, Pang Wei Koh, Jaline Gerardin, Beth Redbird, David Grusky, Madhav Marathe, and Jure Leskovec KDD 2021 (oral)

Best Paper Award, Applied Data Science Track (1 out of 705 submissions)

[6] Mobility network models of COVID-19 explain inequities and inform reopening

Serina Chang^{*}, Emma Pierson^{*}, Pang Wei Koh^{*}, Jaline Gerardin, Beth Redbird, David Grusky, and Jure Leskovec

Nature 2021

Also presented at Networks 2021 (oral); NeurIPS 2020 COVID-19 Symposium (invited talk); NeurIPS 2020 Machine Learning for Health Workshop

Coverage in 650+ news outlets, including *The New York Times* and *The Washington Post*; ranked as #3 most online impact among 901 similar-age papers published by *Nature* (metrics)

- [5] Epidemic dynamics in inhomogeneous populations and the role of superspreaders Kyle Kawagoe*, Mark Rychnovsky*, Serina Chang, Greg Huber, Lucy M. Li, Jonathan Miller, Reuven Pnini, Boris Veytsman, and David Yllanes Physical Review Research 2021
- [4] The socioeconomic mobility gap: disparities in the COVID-19 pandemic Maya Josifovska[†], Serina Chang, and Jure Leskovec Presented at IC²S² 2021
- [3] Automatically inferring gender associations from language Serina Chang and Kathleen McKeown EMNLP 2019 (oral, short paper)
- [2] Detecting gang-involved escalation on social media using context Serina Chang, Ruiqi Zhong, Ethan Adams, Fei-Tzin Lee, Siddharth Varia, Desmond Patton, William Frey, Chris Kedzie, and Kathleen McKeown EMNLP 2018 (oral, long paper)
- [1] Crowd-sourced iterative annotation for narrative summarization corpora Jessica Ouyang, **Serina Chang**, and Kathleen McKeown EACL 2017 (oral, short paper)

WORK EXPERIENCE	 Research Intern, Microsoft Research Advised by Dr. Eric Horvitz and Dr. Adam Fourney Developed methods in graph ML to detect user intents from search logs and derive insights for public health 		
	 Software Engineering Intern, Google, Geo Assistant Built a new, user-facing feature for Google Search and Assistant Implemented backend to parse queries in Search, worked with UX designer and PM to create frontend 	2018	
	 Engineering Practicum Intern, Google, Search Site Reliability Engineering (SRE) Improved internal tools for monitoring and tracking requests to Google Now 	2017	
TEACHING	 Head course assistant (CA), Stanford University, Machine Learning with Graphs (CS224W) 2021 Managed team of 9 CAs and class of around 300 students; oversaw lecture slides, assignments, exams, and final projects Course material covers the foundations and state-of-the-art of machine learning with graphs, including representation learning, graph neural networks, reasoning over knowledge graphs, and algorithms for large-scale networks 		
	Instructor, Girls Who Code, Summer Immersion Program	2019	

- Served as the primary teacher for a classroom of 20 high school girls
- Taught a 7-week curriculum including Python, HTML, CSS, JavaScript, and Arduino

	Instructional assistant, Columbia University, Data Structures in Java (COMS 3134)Led discussion sections, held weekly office hours, and graded assignments and exams	2017
	Peer tutor, Columbia University, Computer Science Theory (COMS 3261)	2017
MENTORSHIP	Mentor, Stanford Computer Science, CURIS (undergraduate summer research)	2023
	Mentor, Machine Learning for Health (ML4H), Career Mentorship Program	2023
	Mentor, Stanford Computer Science, Undergraduate Mentoring Program	2022
	Mentor, Stanford Engineering, Summer Undergraduate Research Fellowship	2021
	Research mentees : Maya Josifovska, Zhiyin Lin, Daisuke Masuda, Emma Wang, (undergraduates); Damir Vrabac (master's); Alicja Chaszczewicz, Jordan Troutman (PhD)	Benjamin Yan
INVITED TALKS	 Stanford, Big Data Methods for Behavioral, Social, and Population Health Research (EPI 270) CMU School of Computer Science, Machine Learning Department Berkeley, EECS Department & Computational Precision Health University of Illinois Urbana-Champaign, Department of Computer Science AAAI'24 Workshop on Graphs and More Complex Structures for Learning and Reasoning University of Washington, Paul G. Allen School of Computer Science & Engineering Microsoft Research NYC, Computational Social Science Cohmbia Business School, Decision, Risk, and Operations Division Cornell, Department of Computer Science & Information Science Johns Hopkins, Department of Computer Science MIT, Department of Political Science & Schwarzman College of Computing NYU Stern School of Business, Department of Technology, Operations, and Statistics Learning on Graphs Conference, Stanford Meetup Northeastern, Network Science Institute Seminar Cornell Tech, Applied Data Science: Decision-Making Beyond Prediction (ORIE 5355) Stanford, Graph Learning Workshop Collaborative (N3C), Machine Learning Seminar Stanford, Algorithmic Fairness Seminar Stanford, Algorithmic Fairness Seminar Stanford, Introduction to Computational Social Science (MS&E 231) Stanford, Fundamental Concepts in MS&E (MS&E 302) Cornell Tech, Urban Data (INFO 5430) Stanford, Big Data Methods for Behavioral, Social, and Population Health Research (EPI 270) OECD-ODISSEI Webinar on Open Data Infrastructure Data Science Podcast Stanford, Networks (MS&E 135) Stanford, Networks (MS&E 135) Stanford, Networks (MS&E 135) Stanford, Networks (MS&E 135) Diaries of Social Data Research Podcast Stanfor	2024 2024 2024 2024 2024 2024 2024 2023 2023
	Stanford, Stats ML Retreat Columbia, NLP Seminar	2020 2019
	Columbia, Emerging Scholars Program (COMS 1404)	2018

GRANTS	NSF Incorporating Human Behavior in Epidemiological Models (IHBEM) Data-driven multimodal methods for behavior-based epidemiological modeling	2023	
	Total funded amount : \$850,000. As a PhD student, I initiated the grant proposal, shaped the research secured a letter of collaboration from Microsoft (from Dr. Eric Horvitz), and helped to write the proposal	ı vision, ıl.	
SERVICE	Organization		
	Co-Chair, KDD Workshop on Epidemiology meets Data Mining and Knowledge discovery (epiDAMIK) 2024	
	Program Chair, Machine Learning for Health (ML4H)	2023	
	Co-Chair, KDD Workshop on Data Science for Social Good	2023	
	Panel Moderator, KDD Equity, Diversity & Inclusion (EDI) Day	2023	
	Faculty Search Committee, Stanford Data Science and School of Engineering	2023	
	Organizer, NYC Digital Humanities Week, Using Computation to Analyze Gender in Film	2019	
	Journal reviewer		
	Proceedings of the National Academy of Sciences	2024	
	Science Advances	2023	
	Nature Human Behaviour	2022	
	American Journal of Sociology	2021	
	ACM Transactions on Spatial Algorithms and Systems	2021	
	npj Urban Sustainability	2021	
	Conference reviewer		
	International Conference on Computational Social Science (IC^2S^2)	2024	
	AAAI	2023	
	Machine Learning for Health	2023	
	EMLNP	2023	
	ACL Rolling Review	2023	
	ICWSM	2023	
	KDD, epiDAMIK Workshop	2023	
	KDD, Data Science for Social Good Workshop	2023	
	ACL Rolling Review	2022	
	Machine Learning for Health	2022	
	ACL, NLP for Positive Impact Workshop	2022	
	KDD, epiDAMIK Workshop	2022	
	ACL-IJCNLP	2021	
	Machine Learning for Health	2021	
	ACL, NLP for Positive Impact Workshop	2021	
	ICLR, AI for Public Health Workshop	2021	
OUTRFACH	Queer in CS Stanford University Organizer 2023	-nresent	
	 Organize social events to build community between LGBTQ+ researchers in CS 		
	Womxn in CS (WiCS), Columbia University, Academic Chair 201	16-2019	
	 Founded WiCS Lightning Talks, a series for underrepresented student researchers to share their research Organized panels with faculty and mentorship events with upperclassmen to help students navigate academics in CS 		
	Lean In at Columbia , Columbia University, Co-President & Senior Advisor 201	16-2019	

- Grew active membership by 5x to reach over 100 committed members attending weekly meetings
 Founded a mentorship program that connected over 70 student-mentor pairs
- Organized the first Lean In at CU conference, sponsored by Microsoft, Facebook, IBM, and others