Anna Fang

annafang@cmu.edu (she/her)

Education

Carnegie Mellon University, School of Computer Science Aug 2020 - Present
PhD in Human-Computer Interaction
GPA: 4.0/4.0

Cornell University, College of Engineering Aug 2015 - May 2019
B.S. Computer Science, Magna Cum Laude

Research Interests

Social Computing, Computational Social Science, Network Science, Artificial Intelligence

Research Experience

Carnegie Mellon University, Graduate Research Assistant Aug 2020 - Present
Under Dr. Haiyi Zhu in Social Computing/HCI
My research is in computational social science for both mental health and community well-being. I am predominantly interested in proactive approaches — those that are self-sustaining, self-correcting, or promote positive behaviors — rather than retrospective handling of harmful behaviors after they have occurred. I draw from any relevant methods and fields, but most often use a combination of network science, artificial intelligence, and social science.

Cornell University Computer Science, Undergraduate Researcher Aug 2017 - Dec 2018
Under Dr. Kilian Weinberger in Machine Learning
Studied question-answering models with deep learning on the Stanford Question Answering Dataset

National Science Foundation, Research Intern May 2016 - Aug 2016
Under Dr. Zina Ben-Miled in Data Analytics
Measured the effects of user sentiment on news propagation across Twitter utilizing sentiment analysis, data analytics, and statistical modeling

Indiana University Purdue University Indianapolis, Research Assistant May 2014 - Aug 2014
Under Dr. Arjan Durresi in Trust Systems and Social Networks
Modeled trust in online communities (Twitter, Epinions) based on balance and status theories

Publications

(*) denotes equal contribution

Refereed Journal Papers

[J4] **Fang, A.*,** Liu, Y.*, Kraut, R., Moriarty, G., Firman, C., Zhu, H. (2023). **Agent-based Simulation of Real-Time Algorithmic Matching for Online Mental Health Communities.** *Under Submission.*

[J3] **Fang, A.**, Yang, W., Zhu, H. (2023). **Shaping Online Dialogue: Examining How Community Rules Affect Discussion Structures on Reddit.** *Under Revision.*

[J2] **Fang, A.***, Yang, W.*, Zhu, H. (2024). **What Makes Digital Support Effective? How Therapeutic Skills Affect Clinical Well-Being.** *To Appear In Proceedings of the ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW '24).*

[J1] **Fang, A.** & Zhu, H. (2022). **Matching for Peer Support: Exploring Algorithmic Matching for Online Mental Health Communities.** *In Proceedings of the ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW '22).*

Refereed Conference Papers

[C3] **Fang, A.**, Zhu, H. (2023). **Measuring the Stigmatizing Effects of a Highly Publicized Event on Online Mental Health Discourse.** *In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23)*

[C2] **Fang, A.** & Ben-Miled, Z. (2017). **Does Bad News Spread Faster?.** *IEEE International Conference on Computing, Networking, and Communications.*

[C1] Ruan, Y., Alfantoukh, L., **Fang, A.**, & Durresi, A. (2014). **Exploring Trust Propagation Behaviors in Online Communities.** *International Conference on Network-based Information Systems 2014.*

Industry Experience

Amazon, Software Development Engineer I Aug 2019 - Aug 2020

eCommerce Platform - Seattle, WA

Integrated third-party software Vertex into Amazon's existing pricing platform.
Used Amazon RDS with mySQL to deploy databases with updated pricing regulations in marketplaces worldwide.

Amazon, Software Engineer Intern May 2018 - Aug 2018

Personalization Team, Recommender Systems - Seattle, WA

Created rule-based recommendation model for non-consumable products in "Buy It Again".
Designed & implemented automated system that increased ~30% coverage in categorizing products for Amazon recommenders

The Aerospace Corporation, Software Engineer Intern June 2017 - Aug 2017

Launch Vehicles Team for SpaceX - El Segundo, CA

Designed and implemented visualization tools to analyze real-time telemetry data in SpaceX's control room.

Teaching Experience

Cornell University Computer Science, Head Teaching Assistant Aug 2018 - May 2019

CS3110 Functional Programming & Data Structures

Awarded Cornell's Computer Science Departments' Course Staff Award.

Cornell University Computer Science, Teaching Assistant Aug 2016 - May 2018

CS3110 Functional Programming & Data Structures, CS1110 Introduction to Computing Using Python

Received highest teaching assistant reviews from students in CS3110's history.
Awarded Cornell's Computer Science Department's Course Staff Award.

Awards

Fellowship in Digital Health, Center for Machine Learning & Health at CMU. June 2022 - June 2023

- Covers tuition, stipend, and $3000 research expenses.

Cornell University, Department of Computer Science Course Staff Award. May 2019, May 2018, Dec 2017

Invited Talks

PBS National Meeting, Invited Speaker May 2018
Invited to speak about algorithmic bias and show personally produced short film about AI ethics at the 2018 National Meeting Conference in New Orleans.
Short film about algorithmic bias that was published by PBS to PBS Learning Media for Teachers.

American Society for Engineering Education, Invited Speaker April 2018
Invited to speak on current issues in AI ethics and introducing tech ethics in CS undergraduate education to professors from various universities at the ASEE St. Lawrence Conference.

Other Activities & Professional Service

CMU School of Computer Science, Dean's PhD Advisory Committee (Social Connectedness) Sept 2022 - Sept 2023

Reviewer for JMIR (Journal of Medical Internet Research)
Reviewer for CSCW ‘24, ’23, ‘22, ‘21
Reviewer for CHI ‘23, ‘22, ‘21