Mahasweta Chakraborti

EDUCATION

UNIVERSITY OF CALIFORNIA DAVIS
PhD, Communication
Designated Emphasis :
Computational Social Science
Dec 2024 (Expected)| Davis, CA
Cum. GPA: 3.64 / 4.00

UNIVERSITY OF SOUTHERN CALIFORNIA
MS, Electrical Engineering
Dec 2018 | Los Angeles, CA

JADAVPUR UNIVERSITY
BEng, Electrical Engineering
May 2016 | Kolkata, India

TEACHING

CMN 170: Digital Technology and Change [UCD Winter 2023]
EE 109: Introduction to Embedded Systems [USC Spring 2017]
EE 155: Introduction to Programming for EE [USC Fall 2016]

COURSEWORK

COMPUTING/STATISTICS
Reinforcement Learning
Pattern Recognition
Machine Learning
Statistical Learning Theory
Convex Optimization
Probability
Stochastic Simulation
Linear Algebra
Digital Image Processing
Quantitative Analysis

SOCIAL SCIENCE
Organizational Communication
Organizational Sociology
Game Theory for Political Science
Agent based Modeling
Survey Methods

SKILLS

LANGUAGES
5000+ lines: Python
1000+ lines: R
Familiar: Bash | SQL | HTML | C++
FRAMEWORKS/UTILITIES
Proficient: PyTorch | HuggingFace | LangChain | Git
Familiar: GCP | AWS | Docker | Heroku | MongoDB | MTurk

ABOUT

Computational social scientist and empirical policy researcher working in collaborative software development. I extensively use deep learning and NLP stacks and pursue innovative usage of language models for behavioral experiments, as well as resource constrained representation learning/domain adaptation for ethnomethodological investigations.

EXPERIENCE

UNIVERSITY OF CALIFORNIA DAVIS | GRADUATE STUDENT RESEARCHER
COMPUTATIONAL COMMUNICATION RESEARCH LAB
Jan. 2021 - present | Davis, CA

- Investigating the role of community policies towards sustainable collaboration among OSS projects.
- AI governance in OSS through scope and complexity of model licensing.
- Supported by the National Science Foundation

UNIVERSITY OF CALIFORNIA DAVIS | RESEARCH ASSISTANT COMMUNICATION IN **HEALTH AND TECHNOLOGY RESEARCH LAB**
Feb. 2019 - Dec. 2020 | Davis, CA

- Large scale opinion survey on vaccination among Instagram users.
- Cross-modal transformer based learning to screen anti vaccine content.

PUBLICATIONS

- Yin, L., **Chakraborti, M.**, Schweik, C., Frey, S., Filkov, V. *"Open Source Software Sustainability: Combining Institutional Analysis and Socio-Technical Networks"*, Proceedings of the ACM on Human-Computer Interaction **(PACMHCI), CSCW** (2022)

- Zhou, M*., **Chakraborti, M***., Qian, S., Yu, Z., Zhang, J. (2021). *"Insta-VAX: A Multimodal Benchmark for Anti-Vaccine and Misinformation Posts Detection on Social Media* arXiv preprint arXiv:2112.08470.

- **Chakraborti, M.**, Atkisson, C., Stanciulescu, S., Filkov, V., Frey, S. (2023) *"Do We Run How We Say We Run? Formalisation and Practice of Governance in OSS Communities"* [Under Review]

- Yin, L., Atkisson, C., **Chakraborti, M.**, Virgüez S., Schweik C., Bushouse B., Frey S., Filkov V. (2023) *"How do OSS projects govern themselves in the wild? An Empirical Study on $Governance.md$ Markdown Files"* [Under Review]

CONFERENCES

- **Chakraborti, M.**, St⬚nciulescu, ⬚., Filkov, V., Frey, S. *"Semantic Analysis of Formal Policies and Community Practices in OSS"*, 9th International Conference on Computational Social Science **(IC2C2)**, Copenhagen, Denmark, July 2023 .

- D'souza, S., Jar, S., **Chakraborti, M.**, Chatterjee, A., Ray, P. *"Heart rate estimation from photoplethysmogram during intensive physical exercise using non-parametric Bayesian factor analysis."*, 49th Asilomar Conference on Signals, Systems and Computers (pp. 617-621), **IEEE**, California, USA, Nov 2015 .

- **Chakraborti, M.**, Akash, B.S., Frey, S. (2023) *"NLP4Commons : A Comprehensive Library for Exploring Governance in Online Communities"* [Under Preparation]

ACHIEVEMENTS

| 2010 | State level | Qualified | Regional Mathematical Olympiad (RMO) |
| 2012 | National level | Top 1.5% | Indian Institute of Technology Entrance (IIT JEE) |