

# Mahasweta Chakraborti

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## EDUCATION

**UNIVERSITY OF CALIFORNIA DAVIS**  
PHD, COMPUTATIONAL SOCIAL  
SCIENCE

(COMMUNICATION)

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

**UCD CMN 170:** Digital  
Technology and Change

**USC EE 109:** Introduction to  
Embedded Systems

**USC EE 155:** Introduction to  
Programming for EE

## 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 researching governance in Open-Source Software (OSS) development and AI. Besides big data curation and analysis, I specialize in integrating natural language modeling techniques for behavioral studies in human-computer interaction. This includes semantic measurements, resource-constrained learning, and domain adaptation strategies for mixed-methods investigations.

## EXPERIENCE

**GRADUATE STUDENT RESEARCHER | UNIVERSITY OF CALIFORNIA DAVIS**

COMPUTATIONAL COMMUNICATION RESEARCH LAB | NATIONAL SCIENCE FOUNDATION

Jan. 2021 - present | Davis, CA

- Investigating the role of community policies towards sustained collaboration and productivity among OSS projects.
- Open Source AI governance through model transparency and licensing.

**RESEARCH ASSISTANT | UNIVERSITY OF CALIFORNIA DAVIS**

COMMUNICATION IN HEALTH AND TECHNOLOGY RESEARCH LAB

Feb. 2019 - Dec. 2020 | Davis, CA

- Large scale opinion survey to measure perception of vaccine misinformation on Instagram data.
- Cross-modal transformer based learning to screen anti vaccine content.

## SELECTED PUBLICATIONS

- Chakraborti, M.,** Atkisson, C., Stanculescu, S., Filkov, V., Frey, S. (2023). *Do We Run How We Say We Run? Formalization and Practice of Governance in OSS Communities.* arXiv preprint arXiv:2309.14245 [Accepted: Proceedings of the Conference on Human Factors in Computing Systems ACM CHI '24] arXiv:2309.14245
- Chakraborti, M.,** Akash, B.S., Virgüez-Ruiz, S., Frey, S. (2023) "NLP4Gov: A Comprehensive Library for Computational Policy Analysis" [Accepted: Extended Abstract, Proceedings of the Conference on Human Factors in Computing Systems ACM CHI '24] arXiv:2404.03206
- 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 (**CSCW**, 2022) arXiv: 2203.03144
- 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:2112.08470
- 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]
- 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 .

## TALKS AND PRESENTATIONS

- Chakraborti, M.,** Stanculescu, S, 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 .

## ACHIEVEMENTS

2010	State level	Top 100	Regional Mathematical Olympiad (RMO)
2012	National level	Top 1.5%	Indian Institute of Technology Entrance (IIT JEE)