

## 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 researching efficient management of collaborative software development in OSS. I extensively incorporate deep learning and NLP stacks to pursue innovative applications of language models for behavioral studies at scale, including 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 sustained collaboration and productivity 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 (**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., Stanculescu, 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.**, 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 .
- 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) "NLP4Gov: 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)