# Swapneel Mehta

### mehtaver.se | swapneel@mit.edu | LinkedIn | US Permanent Resident

### **NEW YORK UNIVERSITY**

PHD IN DATA SCIENCE Aug 2023 | New York, NY GPA: 3.8/4

### **MUMBAI UNIVERSITY**

BENG IN COMPUTER SCIENCE June 2018 | Mumbai, India Cum. GPA: 9.23/10

# **COURSEWORK**

### **DOCTORAL**

Machine Learning Causal Inference Inference and Representation Math Tools for Data Science Unicode ML Summer School (Instructor, funded by Google Research)

### **UNDERGRADUATE**

Artificial Intelligence
Big Data Analysis
Operating Systems
Database Management Systems
Computer Networks
Unicode

Officode

(Co-founder, FOSS Training Program)

## **AWARDS**

| 2023 | Google exploreCSR Award   |
|------|---------------------------|
| 2023 | WSDM Smart City Challenge |
| 2022 | AI2Amplify Fellowship     |
| 2022 | MIDAS Future Leader Forum |
| 2020 | IRIS-HEP Fellowship       |
| 2018 | Oxford MLHEP Challenge    |
| 2018 | India's Top 33 Engineers, |
|      | Economic Times            |

# **SKILLS**

Python, Pytorch • MySQL • Bash • R GCP • BigQuery • Unix/Linux • AWS Docker • git • LAMP • SLURM HTML/CSS • Javascript • C++ • Java

# LINKS

Github://swapneelm Twitter://@swapneel\_mehta YouTube://swapneel\_mehta

### **BOSTON UNIVERSITY AND MIT** | POSTDOCTORAL ASSOCIATE

Oct 2023 - Present | Cambridge, MA

- Investigating how to mitigate false ads in digital marketplaces, building the Platform Governance Lab.
- Talks: IC2S2, WISE, Stanford TSRC, Columbia MarkTech, Yale AI/ML Conf.

### **SAKHI** | Co-FOUNDER AND CHIEF SCIENTIST

July 2023 - Present | New York, NY

- MIT-incubated tech venture **improving women's health literacy** through Al-informed, personalized **behavioral interventions** on WhatsApp.
- Launched IRB-backed maternal health pilot with 140 families in Jalgaon, India, menstrual health pilot with 200+ families in Dhaka, Bangladesh.
- Won USD 62,500 in grants from AWS, MIT IDEAS, Delta-V, UNICEF, UNDP.
- Invited to present to World Bank, lead capstone teams at MIT E-Lab and SEID.

### **SIMPPL** | FOUNDER AND PRESIDENT

Dec 2021 - Present | New York, NY

- Building research-backed tools to improve trust on the social internet for 100M+ users in 6 countries with the UN, New York Public Radio, Sunday Times, Deutsche Welle, Jagran News, 10+ other global partners.
- Leading team of 22 staff, won USD 200,000 in grants from AWS, **Google**, Wikimedia Foundation, Mozilla, NYC Media Lab, Goethe Institut.
- 12+ workshop and conference publications at ICML, NeurIPS, AAAI, ICWSM, IC2S2, dg.o, Stanford TSRC, C+J, Truth and Trust Online.
- Selected as a Google Research Innovator, Founder Fellow, Belfer Fellow.
- Invited to lead capstone teams at MIT A-Lab by Sinan Aral, NYU DS.

#### CENTER FOR SOCIAL MEDIA AND POLITICS | Ph.D. RESEARCH

Feb 2021 - Present | New York, NY

- Thesis: Towards Informed Interventions to Limit the Effects of Misleading Information on Social Networks.
- Identify the causal effect of Reddit's outages on low quality news sharing.
- Identify the causal impact of Twitter's warning labels on Trump's tweets (Stanford Trust & Safety Research Conference).
- COVID infection modeling with probabilistic programs at MIT PROBPROG.

# CERN, CMS EXPERIMENT | TECHNICAL STUDENT (ML RESEARCH)

March 2018 - July 2019 | Geneva, Switzerland

- Developed graph neural networks for particle track reconstruction at the LHC
- Productionized the **DeepJet** ML framework; awarded by **Google**, **Oxford**.

# INTERNSHIPS

#### SLACK, CENTRAL DS | PRODUCT DATA SCIENCE INTERN

May 2023 - Aug 2023 | New York, NY

• Identified 'social' learning drivers of feature adoption at Slack (NDA).

# TWITTER, CIVIC INTEGRITY | Machine Learning Engineer

June 2022 - Aug 2022 | New York, NY

• Improved the precision of their civic and health misinfo. classifier (BigQuery ML) by 20% scoring 1M+ tweets / week. NLP; recommender systems.

### REVIEWER

- 2024 IEEE DSAA MLJ
- 2024 Springer Al and Ethics
- 2024 ACM CHI
- 2024 EPJ Data Science
- 2024 Springer Nature ML
- 2023 NeurIPS Workshops
- 2023 AABI
- 2023 ICLR, AI4ABM Workshop
- 2023 AI+Local News Challenge
- 2022 ICML, AI4ABM Workshop
- 2022 NeurIPS, WBRC
- 2019 Elsevier JPDC

### **TALKS**

- 2024 (Upcoming) Yale AI/ML Conf.
- 2024 (Upcoming) WISE Conf.
- 2024 (Upcoming) MarkTech Columbia
- 2024 MIT Decentralized AI Summit
- 2024 Stanford (TSRC)
- 2024 TrustCon (AI + Elections)
- 2024 IC2S2 (Oral)
- 2024 ATIH, Embassy of Finland
- 2024 UNESCO, DW Akademie
- 2024 DW (Online Trust)
- 2023 DW Innovation Days
- 2023 IIT Madras Data Science
- 2023 SimPPL Fellowships
- 2023 Mandiant mWise (Google)
- 2023 McKinsey Guest Talk
- 2023 TrustCon (Community Building)
- 2023 MIDAS Future Leaders Summit
- (Responsible AI)
- 2023 CCNY SASE "TED Talks"
- 2023 MozFest by Mozilla
- 2023 NYU Data Science Seminar
- 2023 **Deutsche Welle** (multiple)
- 2023 NYC Media Lab
- 2022 Graphika
- 2022 Truth and Trust Online Conf.
- 2022 Twitter, Health ML
- 2022 MIT Media Lab
- 2022 Stanford, T&S Research Conf.
- 2022 NYU Graduate Seminar
- 2022 Misinfo. Village, DEFCON
- 2022 Oxford, Torr Vision Group
- 2021 Twitter, Cortex
- 2021 Facebook, Probability
- 2021 Flatiron Comp. Bio. Group
- 2020 NYC Al Workshop
- 2020 NYU Data Science
- 2018 Mumbai University (multiple)

### **OXFORD, TORR VISION GROUP** | VISITING RESEARCHER

Aug 2021 - June 2022 | Oxford, UK

 Generative modeling of adversarial agent behaviors on Reddit recommendations presented in workshops at ICML and DEFCON, 2022.

### ADOBE RESEARCH | DATA SCIENCE RESEARCH INTERN

May 2020 - Dec 2020 | New York, NY

- Trending Hashtag Recommendation for Videos; NLP, language models, data mining, weakly-supervised learning, multimodal graph neural networks.
- First-author paper accepted at IEEE ISM; U.S. Patent App P10634-US.

### MICROSOFT RESEARCH (IIT-B) | RESEARCH INTERN

May 2016 - May 2017 | New York, NY

- **Prof. S. Sahasrabudhe**, Automated evaluation of Blender 3D Modeling assignments (ICALT 2018); edX Prize Finalist, 2019.
- Microsoft Research: Google Analytics for Lokacart D2C farmer app.

### SMOKESCREEN (ACQ. ZSCALER) | ML INTERN

Nov 2016 - March 2017 | New York, NY

- Reducing the footprint of network scans and building Markov-chain based hostname generation for intelligent decoys.
- Automated deployment of NASSCOM-DSCI awarded software.

## **FELLOWSHIPS**

| 2024 | Atlantic Dialogues Emerging Leader Fellow      |
|------|--|
| 2024 | Finalist, Schmidt Futures Intl. Strategy Forum |
| 2024 | Community Advisory Board, Integrity Institute  |
| 2024 | Responsible Al Affiliate, All Tech is Human    |
| 2023 | Future Founders Fellowship (declined)          |
| 2023 | Google Research Innovator                      |
| 2023 | Future Founders Startup Bootcamp               |
| 2023 | CTS Belfer Fellow                              |

# GRANTS AND AWARDS

| 2024 | MIT Delta V Accelerator                        | USD 20,000 |
|------|--|------------|
| 2024 | MIT PKG IDEAS Challenge                        | USD 13,500 |
| 2024 | FTI: People to Watch in AI and Local News      |            |
| 2024 | Google PaliGemma Award                         | USD 5,000  |
| 2023 | Google (exploreCSR)                            | USD 32,000 |
| 2023 | Mozilla (Responsible Computing Challenge)      | USD 25,000 |
| 2023 | Algovera Al                                    | USD 3,000  |
| 2023 | NYUTech Venture Workshop                       | USD 1,000  |
| 2023 | Belfer Fellowship                              | USD 40,000 |
| 2023 | Goethe Institut                                | EUR 14,000 |
| 2023 | Wikimedia Foundation 'WikiCred' Grant          | USD 10,000 |
| 2023 | Deutsche Welle                                 | EUR 4,950  |
| 2022 | Google Cloud Research Credit Award             | USD 9,000  |
| 2022 | Amazon (AWS) Research Credit Award             | USD 5,000  |
| 2022 | JournalismAI, The Sunday Times                 | USD 4,000  |
| 2021 | UK Research & Innovation Grant (w/ Oxford TVG) | GBP 23,000 |
| 2021 | NYC Media Lab AI + Local News Challenge        | USD 7,500  |
| 2021 | Google Research India                          | INR 85,000 |

# **ORGANIZING**

- 2024 Responsible Innovation Day
- 2024 SimPPL Fellowships
- 2023 NeurIPS MASec Workshop
- 2023 Al, Misinfo. & Policy Seminar
- 2023 ICLR AI4ABM Workshop
- 2023 Misinfo. Village, DEFCON
- 2023 NYU AI School 2023
- 2022 NeurIPS WBRC
- 2022 NYU AI School 2022
- 2022 Al for Everyone, C+J 2022
- 2021 NYU AI School 2021
- 2021 Unicode ML Summer School

## MEDIA

- 2024 **DW: Tackling Disinfo.**
- 2024 DW: Media Literacy
- 2024 Rest of World
- 2024 Boston University
- 2024 NYU: Al Misinfo. Policy Series
- 2024 NYU: Al School
- 2023 Jagran new Media
- 2023 Google Research
- 2018 Open Source for U

## **PUBLICATIONS**

- [1] A. Shah, P. Banerjee, J. Kuang, A. Nichols, N. Mazar, M. van Alstyne, S. Mehta. 'Market Design Interventions for Safer Agentic Al'. Working Paper; Oral Talk, Yale Al, ML, and Business Analytics Conference, 2024.
- [2] H. Ranka, D. Shah, R. Sannikov, E. Brichetto, L. Ng, S. Mehta. 'Bridging Nodes and Narrative Flows: A Graph-Theoretic Analysis of Telegram's Disinformation Ecosystem'. Working Paper; Poster at Stanford T&S Research Conference, 2024.
- [3] D. Shah, S. Shetty, S. Mehta. 'The Double-Edged Sword of User Agency: Empowerment and Risk in Decentralized Social Media Platforms'. Working Paper; Poster at Stanford T&S Research Conference, 2024.
- [4] S. Mehta, M. van Alstyne. 'Improving Economic Welfare in Reputation-based Marketplaces with Truth Warrants'. Working Paper. Oral Talk, Workshop on Information Systems and Economics, 2024.
- [5] S. Mehta, Z. Yang, C. Fan, D. Liu, N. Mazar, M. van Alstyne. 'Reducing Misleading Claims in Digital Marketplaces using Truth Warrants'. Working Paper (under review), 2024.
- [6] R. Konka, P. Kurani, S. Mehta., L. Ng. 'Multimodal Analysis of Instagram Marketing Strategies Across Developed and Developing Countries'. Working Paper, 2024.
- [7] G. Malpani, S. Mehta. 'The Effect of Influencers on the Independent re-sharing of News in an Alt-Right Ecosystem'. Working Paper, 2024.
- [8] V. Dalal, A.V. Singh, C. Schroeder de Witt, S. Mehta. 'Using Large Language Model Debates to Predict X's Community Notes Reviews'. Working Paper, 2024.
- [9] R. Jain, S. Mehta, F. Barez, P. Torr. 'Detecting Emergent Social Media Misinformation in the Era of LLMs'. Working Paper, 2024.
- [10] S. Mehta, J. Bisbee, Z. Sanderson, R. Bonneau, J. Tucker, and J. Nagler. 'Identifying the Causal Effects of Twitter's Interventions on Trump's Tweets'. Working Paper; Oral Talk, Stanford Trust and Safety Conference; Invited Talk, Twitter 2022-24.
- [11] S. Mehta, K. Aslett, Z. Sanderson, R. Bonneau, J. Tucker, and J. Nagler. 'Platform Outages Increase the Sharing of High-quality News on Reddit'. Working Paper, 2023.
- [12] S. Mehta, S. Sarkhel, X. Chen, S. Mitra, V. Swaminathan, R. Rossi, A. Aminian, H. Guo, and K. Garg. 'Open-Domain Trending Hashtag Recommendation for Videos'. In IEEE International Symposium on Multimedia (ISM), 2021.
- [13] S. Mehta, and N. Kasmanoff. 'Covid-19 Modeling and Control via Policy Interventions'. In International Conference on Probabilistic Programming (PROBPROG), 2021.
- [14] S. Mehta, C. Raman, N. Ayer, and S. Sahasrabudhe. 'Auto-Grading for 3D Modeling Assignments in MOOCs'. Oral Talk, International Conference on Advanced Learning Technologies (ICALT), 51–53. IEEE, 2018.
- [15] S. Mehta, P. Kothuri, and D.L. Garcia. 'A Big Data Architecture for Log Data Storage and Analysis'. Best Paper, ML Track. Integrated Intelligent Computing, Communication and Security, 201–9. Springer, Singapore, 2018.
- [16] S. Mehta, P. Kothuri, and D.L. Garcia. 'Anomaly Detection for Network Connection Logs'. arXiv Preprint arXiv:1812.01941, 2018.

### **WORKSHOP PAPERS**

- [17] S. Mehta, S. Wiedswang, Z. Yang, N. Mazar, M. van Alstyne. 'Improving the Governance of Digital Platforms with Interactive Marketplace Experiments'. Oral Talk, Intl. Conference on Computational Social Science, 2024.
- [18] H. Ranka, M. Surana, N. Kothari, V. Pariawala, P. Banerjee, A. Surve, S.R. Sankepally, R. Jain, J. Lalwani, S. Mehta. 'Examining the Implications of Deepfakes for Election Integrity'. Oral Talk, AAAI Workshop on AI for Credible Elections, 2024.
- [19] S. Mehta, A.G. Baydin, R. Bonneau, J. Nagler, and P. Torr. 'Estimating the Impact of Coordinated Inauthentic Behavior on Content Recommendations in Social Networks'. Oral Talk, Workshop Al for Agent-Based Modelling, ICML 2022.
- [20] A. Surve\*, A. Shamraj\*, and S. Mehta. 'How Decentralization Affects User Agency on Social Platforms'. Oral Talk, Data Challenge, AAAI Intl. Conference on Web and Social Media (ICWSM), 2024.
- [21] C. Shah, R. Konka, G. Malpani, S. Mehta, and L. Ng. 'Can Social Media Platforms Transcend Political Labels? An Analysis of Neutral Conservations on Truth Social'. Oral Talk, DARE Workshop, AAAI Intl. Conference on Web and Social Media (ICWSM), 2024.
- [22] A. Surve, A. Rathod, M. Surana, G. Malpani, A. Shamraj, S.R. Sankepally, R. Jain, and S. Mehta. 'Multiagent Simulators for Social Networks'. (Oral) In Multi-Agent Security Workshop, NeurIPS 2023, 2023.
- [23] D. Gandhi, R. Jain, J. Gala, J. Lalwani, and S. Mehta. 'Expanding Access to ML Research through Student-Led Collaboratives'. In Workshop on Broadening Research Collaborations, NeurIPS 2022.
- [24] A. Ganeriwalla, and S. Mehta. 'Application of OLS Regression and VAR Models to Analyse the Economies of Varying Political Regimes'. Journal of Student Research 10, no. 4 (2021).

#### TECH POLICY RESEARCH AND REPORTS

- [25] C. Vergara, J. Lalwani, H. Ranka, N. Kothari, and S. Mehta. 'A Principled Framework to Organize and Develop Social Media Interventions'. Working Paper, 2024.
- [26] C. Vergara, R. Jain, and S. Mehta. 'A History of Transparency Reform to Shape Platform Regulation'. Intl. Conference on Digital Governance (dg.O), 2024.
- [27] A. Sharma, A. Shetty, M. Surana, and S. Mehta. 'Harassment in the Digital Arena: Analyzing Online Abuse Against U.S. Politicians'. Report, ADL Center for Tech and Society, 2024.
- [28] S.W. Baksh, D. Mungra, N. Ahasan, V. Pariawala, R. Jain, A. Surve, P. Banerjee, S.M. Eron, S. Mehta, S.R. Diya. 'How Facebook Has Become A Political Battleground In Bangladesh'. *Report (Tech Global Institute)*, 2024.
- [29] S.W. Baksh, D. Mungra, V. Pariawala, R. Jain, A. Surve, A. Das, M. Biswas, F. Afroz, S.M. Eron, S. Mahmood, S. Mehta, S.R. Diya. 'From homophobia to assault: The gendered landscape of Bangladesh's political disinformation'. Report (Tech Global Institute), 2024; Meta issued takedown.
- [30] A. Sharma, A. Shetty, M. Surana, S. Mehta. 'Harassment in the Digital Arena: Analyzing Online Abuse Against U.S. Politicians'. Report (ADL Center for Tech and Society), 2024.
- [31] H. Ross, B. Silverman, J. Allen, S. Mehta, et al. 'Shining a Light on Platform Transparency Best Practices'. Report (Integrity Institute), 2023.
- [32] G. Ellingson, K. Harbath, J. Allen, Eric Davis, A. Leavitt, S. Mehta, et al. 'Defining and Achieving Success in Elections Integrity'. Report (Integrity Institute), 2023.