Rajiv Movva

rm868@cornell.edu | <u>Webpage</u> | Updated Dec 2022
Interests: Ethical Machine Learning, Sociotechnical Systems, Biology / Healthcare

EDUCATION

PhD Candidate, Cornell University 2022 - 2027
Computer Science; Cornell Tech campus
Advisors: Emma Pierson, Nikhil Garg

Bachelor of Science, Massachusetts Institute of Technology 2018 - 2022
Computer Science; Minors in Biology and Gender Studies. GPA: 4.9/5.0
Research Advisors: Catherine D'Ignazio, Michael Carbin

AWARDS

NSF Graduate Research Fellow 2022 - 2025

Best Student Paper, *ACM FAccT* **Conference** 2022

Finalist, Hertz Fellowship (top-45 applicant out of 650) 2022

Burchard Scholar, MIT (30 students demonstrating "excellence in humanities") 2021

Best Paper, *BlackboxNLP* **Workshop** 2020

Davidson Fellow 2018

Finalist, Regeneron Science Talent Search 2018

PUBLICATIONS

6. **Rajiv Movva**, Jinhao Lei, Shayne Longpre, Ajay Gupta, Chris DuBois. "<u>Combining Compressions for Multiplicative Size Scaling on Natural Language Tasks.</u>" *COLING* 2022.

5. Harini Suresh, **Rajiv Movva**, Amelia Dogan, Giulia Taurino, Rahul Bhargava, Catherine D'Ignazio. "<u>Towards Intersectional, Feminist, Participatory ML: A Case Study in Supporting Feminicide Counterdata Collection.</u>" *FAccT* 2022, **Best Paper**.

4. **Rajiv Movva**, Jonathan Frankle, Michael Carbin. "<u>Studying the Consistency and Composability of Lottery Ticket Pruning Masks.</u>" *ICLR* Workshop on Science and Engineering of Deep Learning 2021.

3. **Rajiv Movva** and Jason Zhao. "<u>Dissecting Lottery Ticket Transformers: Structural and Behavorial Study of Sparse Neural Machine Translation.</u>" BlackboxNLP @ *EMNLP* 2020, **Best Paper**.

2. **Rajiv Movva**, Peyton Greenside, Georgi K Marinov, Surag Nair, Avanti Shrikumar, Anshul Kundaje. "<u>Deciphering regulatory DNA sequences and noncoding genetic variants using neural network models of massively parallel reporter assays.</u>" *PLoS ONE* (2019).

1. Remzi Celebi, Oliver Bear Don't Walk, **Rajiv Movva**, Semih Alpsoy, Michel Dumontier. "<u>In-silico Prediction of Synergistic Anti-Cancer Drug Combinations Using Multi-omics Data.</u>" *Scientific Reports* (2019).

WORK EXPERIENCE

Waymo – *Machine Learning Intern, Behavior Prediction*   Summer 2021
Causal trajectory prediction for other agents

Apple – *Research Intern, NLP*   Spring 2021
Quantization & distillation for efficient BERT inference

NVIDIA – *Machine Learning Intern, Genomics*   Summer 2020
GPU acceleration for single-cell ATAC-seq analysis

Genesis Therapeutics – *Research Intern*   Summer 2019
Graph neural networks for ligand-protein binding prediction

Stanford Genetics – *Student Researcher (advised by Anshul Kundaje)*   Summer 2017 & 2018
Interpreting ConvNets to infer regulatory DNA grammars

PREPRINTS / OTHER WRITING

Corey Nolet, Avantika Lal, Rajesh Ilango, Taurean Dyer, **Rajiv Movva**, John Zedlewski, Johnny Israeli. "Accelerating single-cell genomic analysis with GPUs." *bioRxiv* (2022).

Rajiv Movva. "Fairness Deconstructed: A Sociotechnical View of 'Fair' Algorithms in Criminal Justice." (2021).

Rajiv Movva. "Algorithms Won't Solve Criminal Justice." (2020).

Rajiv Movva. "Calling Out COVID-19 Napkin Math." (03/2020).

SELECTED COURSEWORK

Machine Learning	6.867 Advanced Machine Learning, 6.864 Advanced Natural Language Processing, 6.883 Computational Therapeutic Design, 6.884 Neuro-symbolic Models for NLP, 6.438 Algorithms for Inference
Social Sciences	INFO 6210 Information, Technology, and Society (Cornell, Prof. Helen Nissenbaum), WGS.301 Feminist Theory, WGS.245 Queer Literature, 11.S195 Data Activism & Gender-Based Violence, WGS.S10 Feminist Data Ethics
Misc. (Biology, General CS)	7.20 Human Physiology, 7.28 Molecular Biology, 7.05 Biochemistry, 7.29 Cellular Neuroscience, 6.02 Signals & Networks, 6.172 Software Performance Engineering

SKILLS / ACTIVITIES

Programming: Python (NumPy, Matplotlib & seaborn, TensorFlow, PyTorch), R, C++

AI Club @ MIT [link]*:* President (2020-21), Workshops Chair (2019-20)

The Tech (MIT newspaper) [link]: Arts Writer (2020-21)

AI Ethics Reading Group [link]: Member (2019-2021)

Languages: English (native), French (basic), Telugu (basic)

Hobbies: Cooking South Indian food (advanced), lifting weights (intermediate), reading (beginner)