Mayank Agrawal

Ph.D. Student
Princeton Neuroscience Institute 238B

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Education

Princeton University, Princeton, NJ   2018–
Ph.D. Psychology and Neuroscience
Advisors: Jonathan D. Cohen and Thomas L. Griffiths

Swarthmore College, Swarthmore, PA   2014–2018
B.A. Computer Science and Philosophy
Thesis: *An Application of Computational Learning Theory to Moral Epistemology*
Advisor: Alan R. Baker

University of Oxford, Oxford, UK   2016–2017
Visiting Student, St. Anne's College
Computer Science and Philosophy

Publications

WORKING MANSUCRIPTS

1. **Agrawal M**, Peterson JC, Cohen JD, Griffiths TL (under review). Stress, Intertemporal Choice, and Mitigation Behavior During the COVID-19 Pandemic.

2. Christian IR, **Agrawal M** (under review). A Computational Model of Unintentional Mind Wandering in Focused Attention Meditation.

PEER-REVIEWED

3. Peterson JC, Bourgin DD, **Agrawal M**, Reichman D, Griffiths TL (2021). Using Large-Scale Experiments and Machine Learning to Discover New Theories of Human Decision-Making. *Science*.

4. **Agrawal M**, Mattar MG, Cohen JD, Daw ND (2021). The Temporal Dynamics of Opportunity Costs: A Normative Account of Cognitive Fatigue and Boredom. *Psychological Review*.

5. **Agrawal M**, Peterson JC, Griffiths TL. (2020). Scaling up Psychology via Scientific Regret Minimization. *Proceedings of the National Academy of Sciences*.

6. Jas M, Achakulvisut T, Idrizović A, Acuna D, Antalek M, Marques V, Odland T, Garg RP, **Agrawal M**, Umegaki Y, Foley P, Fernandes H, Harris D, Li B, Pieters O, Otterson S, de Toni G, Rodgers C, Dyer E, Hamalainen M, Kording K, Ramkumar P (2020). Pyglmnet: Python implementation of elastic-net regularized generalized linear models. *Journal of Open Science Software*.

7. **Agrawal M**, Peterson JC, Griffiths TL (2019). Using Machine Learning to Guide Cognitive Modeling: A Case Study in Moral Reasoning. *Proceedings of the 41st Annual Conference of the Cognitive Society*.

8. Moraud, EM, Tinkhauser G, **Agrawal M**, Brown P, Bogacz R (2018). Predicting Beta Bursts From Local Field Potentials to Improve Closed-loop DBS Paradigms in Parkinson's Patients. *40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*.

CONFERENCE / WORKSHOP ABSTRACTS

9. **Agrawal M** (2020). An Application of Computational Learning Theory to Moral Epistemology. *46th Annual Meeting of the Society for Philosophy and Psychology.* (Cancelled due to COVID-19.)

10. **Agrawal M**, Mattar MG, Daw ND, Cohen JD (2020). The Temporal Dynamics of Opportunity Costs: A Normative Account of Mental Fatigue and Boredom. *'Mental Effort: One Construct, Many Faces?' Workshop, 42nd Annual Conference of the Cognitive Society.*

11. **Agrawal M**, Mattar MG, Daw ND, Cohen JD (2019). Rational Arbitration of Hippocampal Replay. *2019 Conference on Cognitive Computational Neuroscience.*

12. **Agrawal M**, Peterson JC, TL Griffiths (2019). Understanding a Large Dataset of Moral Decisions Through Scientific Regret Minimization. *Moral Decision Making Workshop, 4th Multidisciplinary Conference on Reinforcement Learning and Decision Making .*

Awards

Cognitive Science Graduate Student Fellow, *Princeton University*	2020
National Defense Science & Engineering Graduate Fellowship	2019
Center for Brains, Minds & Machines Summer School	2019
Computational Neuroscience Travel Grant, *Swarthmore College*	2017
John W. Nason Community Service Fellowship, *Swarthmore College*	2016
Philip Evans Scholar, *Swarthmore College*	2014

Teaching

PRINCETON UNIVERSITY

PSY / COS 360: Computational Models of Cognition, *Teaching Assistant*	2021
PSY / NEU 330: Computational Modeling of Psychological Function, *Teaching Assistant*	2021
PSY / COS 454: Probabilistic Models of Cognition, *Teaching Assistant*	2020

PRINCETON NEUROSCIENCE INSTITUTE

Introduction to Python, *Instructor*	2019

SWARTHMORE COLLEGE

PHIL 012: Logic, *Teaching Assistant*	2017
CPSC 021: Introduction to Computer Science, *Teaching Assistant*	2015

BREAKTHROUGH HOUSTON

8th Grade Algebra, *Teaching Fellow*	2014
7th Grade Algebra, *Teaching Fellow*	2013

Invited Talks

1. NSF Prepare Rapid PI Meeting   2021

2. Feldman Barrett Lab, Northeastern University   2021

3. Apps Lab, University of Birmingham and University of Oxford   2021

4. Army Research Office Seminar Series on Pioneers in Life and Human Sciences   2021

5. MILA Neuro-AI Reading Group, Université de Montréal and McGill University   2020

6. Gershman Lab, Harvard University   2020

7. Workshop on Scaling Cognitive Science, Cognitive Science Conference   2020

8. Scaling Cognitive Science Workshop, Princeton University   2019

Professional Service

AD HOC REVIEWING

Biological Psychiatry, Cognitive Psychology, NeurIPS (Workshop), PLOS Computational Biology, topiCS

DEPARTMENT

Graduate Student Committee

Emerging Scholars of Psychological Science (ESPS) Talk Series