

# Mayank Agrawal

Ph.D. Student  
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## Education

**Princeton University**, Princeton, NJ 2018–  
Ph.D. Psychology and Neuroscience  
Advisors: Jonathan D. Cohen & 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

## Publications

### WORKING MANUSCRIPTS

1. **Agrawal M**, Mattar MG, Daw ND, Cohen JD. The Temporal Dynamics of Opportunity Costs: A Normative Account of Mental Fatigue and Boredom.
2. Peterson JC, Bourgin DD, **Agrawal M**, Reichman DR, Griffiths TL. Using large-scale experiments and machine learning to discover new theories of human decision-making.

### PEER-REVIEWED

3. **Agrawal M**, Peterson JC, Griffiths TL. (2020). Scaling up Psychology via Scientific Regret Minimization. *Proceedings of the National Academy of Sciences*.
4. 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. Pyglmnet: Python implementation of elastic-net regularized generalized linear models. *Journal of Open Science Software*.
5. **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*.
6. 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 ABSTRACTS

7. **Agrawal M**. (2021). An Application of Computational Learning Theory to Moral Epistemology. *46th Annual Meeting of the Society for Philosophy and Psychology*.
8. **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*.

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

## **Awards**

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

## **Teaching**

### PRINCETON UNIVERSITY

PSY 210: History of Psychology, <i>Teaching Assistant</i>	2021
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### PRINCETON NEUROSCIENCE INSTITUTE

Introduction to Python, <i>Instructor</i>	2019
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### SWARTHMORE COLLEGE

PHIL 012: Logic, <i>Teaching Assistant</i>	2017
CPSC 021: Introduction to Computer Science, <i>Teaching Assistant</i>	2015

## **Invited Talks and Panels**

1. Workshop on Scaling Cognitive Science – COGNITIVE SCIENCE CONFERENCE	2020
2. Scaling Cognitive Science Workshop – PRINCETON, NJ	2019