

BRENDAN CULLEN

I am a 3rd-year PhD student and [National Science Foundation GRFP Fellow](#) in the Department of Psychology at the University of Oregon, where my research focuses on applied predictive modeling of real-world health behaviors and outcomes in an effort to advance a precision medicine framework for behavioral health. As an aspiring data scientist, my long-term goal is to contribute to open-source software and to apply my computational skills as a researcher within an industry setting focused on enhancing health across the lifespan.



EDUCATION

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|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 2022
I
2017 | <ul style="list-style-type: none">● PhD Student, Psychology
University of Oregon<ul style="list-style-type: none">• My research takes a translational (neuro)science approach toward predictive modeling of real-world health behaviors and health outcomes within a precision medicine framework.• I am currently pursuing a 5-course Data Science Specialization taught entirely in R, focused on data visualization, functional programming, and machine learning. | 📍 Eugene, OR |
| 2019
I
2017 | <ul style="list-style-type: none">● MS, Psychology
University of Oregon<ul style="list-style-type: none">• Thesis: Comparing cognitive and affective predictors of craving | 📍 Eugene, OR |
| 2015
I
2011 | <ul style="list-style-type: none">● BA, Neuroscience
Middlebury College<ul style="list-style-type: none">• Thesis: Neurophysiological correlates of self-referential activity in meditators and non-meditators | 📍 Middlebury, VT |

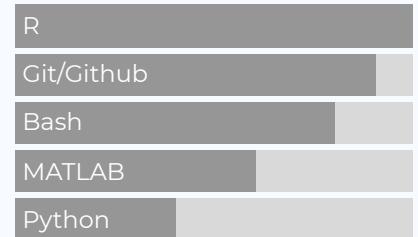
🏆 HONORS & AWARDS

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|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2023
I
2018 | <ul style="list-style-type: none">● NSF Graduate Research Fellowship
National Science Foundation |
| 2020 | <ul style="list-style-type: none">● Center on Parenting and Opioids Pilot & Training Core Travel Award
University of Oregon |
| 2020 | <ul style="list-style-type: none">● Graduate School “Special Opps” Travel & Research Award
University of Oregon |
| 2019 | <ul style="list-style-type: none">● Graduate Education Committee Travel Award
Department of Psychology, University of Oregon |
| 2017 | <ul style="list-style-type: none">● Graduate School Recruitment Award
University of Oregon |
| 2017 | <ul style="list-style-type: none">● Mind and Life Summer Research Institute Fellow
Mind and Life Institute |

CONTACT

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- 👤 [@brendanhcullen](https://www.linkedin.com/in/bcull)
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- linkedin linkedin.com/in/bcull

PROGRAMMING SKILLS



Made with the R package
[pagedown](#).

The source code is available at
<https://bit.ly/2l6Cqyb>.

Last updated on 2020-03-01.

- 2017 ● **International Symposium for Contemplative Studies Scholarship**
Mind and Life Institute
- 2015 ● **BA in Neuroscience with Highest Honors, Summa Cum Laude**
Middlebury College
- 2015 ● **Elected to Phi Beta Kappa**
Middlebury College
- 2015 | 2011 ● **Dean's Honor List (8 semesters)**
Middlebury College
- 2015 ● **Rosalin Lieberman-Reiss Memorial Award**
Department of Psychology, Middlebury College
• Awarded to a graduating senior who shows the greatest promise to contribute to the treatment and cure of severe mental illness.
- 2015 ● **Mind and Life Summer Research Institute Fellow**
Mind and Life Institute
- 2014 ● **International Symposium for Contemplative Studies Scholarship**
Mind and Life Institute
- 2014 ● **Academic Conference Travel Fund Award**
Middlebury College
- 2014 ● **Senior Research Project Supplement**
Middlebury College
- 2014 ● **Bicentennial Fund for Research Partnerships in the Sciences Fellowship**
Middlebury College
- 2013 ● **Fred M. Roddy Research Fellowship in Biomedical Science**
Middlebury College

PROFESSIONAL RESEARCH EXPERIENCE

- 2018 | 2017 ● **Graduate Employee**
Social and Affective Neuroscience Lab  University of Oregon
• Selected self-report measures and co-designed interventions for NCI-funded RCT comparing behavioral response and cognitive reappraisal interventions for de-valuing unhealthy food
• Created automated workflow for daily backup of fMRI backup via a high performance computing cluster.
- 2017 | 2015 ● **Research Assistant**
Clinical and Affective Neuroscience Lab  Brown University
• Cleaned and scored self-report data (20+ measures) from an NIH-funded 3-armed RCT comparing focused awareness meditation, open-monitoring meditation, and Mindfulness-Based Cognitive Therapy on clinical efficacy for depression
• Led a project investigating the effects of meditation training on EEG and behavioral measures of self-referential processing

2017
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2015

- **Research Assistant**
Embodied Neuroscience Lab 📍 Brown University
 - Collected EEG data for pilot RCT testing a neuro-muscular-immune model of chronic fatigue in female cancer survivors
 - Designed custom software in MATLAB to implement novel EEG/EMG paradigm for measuring neural correlates of tactile acuity and precision grip strength

2016

- **Recruitment Specialist**
Women's Medicine Collaborative,
Miriam Hospital 📍 Providence, RI
 - Developed strategies to recruit specialized patient populations for randomized controlled trials, including female cancer survivors and patients with asthma

2015
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2014

- **Research Assistant**
Social Psychology of Meditation Lab 📍 Middlebury College
 - Led a study on relationship between mindfulness, hormones, empathy, and prosocial behavior
 - Recruited and interviewed participants, administered surveys and cognitive tests, and analyzed salivary cortisol and testosterone assays

2014
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2013

- **Research Assistant**
Behavioral Neuroendocrinology Lab 📍 Middlebury College
 - Collected animal behavior data on the dose-dependent effects of testosterone replacement on spatial memory
 - Performed behavioral testing, prepared brain samples, collected microscopy data and assisted with manuscript preparation



TEACHING EXPERIENCE

2020

- **Lab Instructor**
[PSY 612: Data Analysis II](#) 📍 University of Oregon
 - Designed and taught lab sections on [Correlations](#), [Univariate Regression and the General Linear Model](#), [Regression with Categorical Predictors](#), [Interactions](#), and [Factorial ANOVA](#).

I believe that learning open source data science tools can empower us to be better scientists. During my third year of graduate school, I served as a teaching assistant and lab instructor for a graduate-level advanced data analysis sequence and have spent a significant amount of time creating educational resources about working with data in R. I have relished the opportunity to help equip my fellow graduate students learn R and increase the efficiency and reproducibility of their own research projects.

2019

- **Lab Instructor**
[PSY 611: Data Analysis I](#) 📍 University of Oregon
 - Designed and taught lab sections on [R Basics and Descriptive Statistics](#), [Matrix Algebra](#), [Data Transformation with dyplr](#), [Pre-registration](#), and [Paired samples t-tests](#).

2015

- **Teaching Assistant**
[PSYC 301: Physiological Psychology](#) 📍 Middlebury College
 - Assisted with lab and discussion sections, held exam review sessions, prepared experimental equipment, and conducted animal testing for student projects

WORKSHOPS TAUGHT

- 2020 • **Introduction to Git and Github**
Psychology First Year Research Seminar  University of Oregon
• Introductory workshop for first-year psychology PhD and Masters students on basics of using Git and Github for version control
- 2019 • **Intermediate Git and Github**
UO Data Science Club  University of Oregon
• Intermediate Git/Github workshop for University of Oregon's Data Science Club, including discussion of merge conflicts, branching, pull requests, and best practices for collaborative Github projects

PUBLICATIONS

- 2018 • **Dismantling Mindfulness-Based Cognitive Therapy: Creation and validation of 8-week Focused Attention and Open Monitoring interventions within a 3-armed randomized controlled trial**
Behaviour and Research Therapy, 101, 92-107.
• Britton, W.B., Davis, J., Loucks, E.B., Peterson, B., Cullen, B., Reuter, L., Rando, A., Rahrig, H., Lipsky, J. & Lindahl, J. (2018).
- 2018 • **Comparing embodiment experiences in expert meditators and non-meditators**
Consciousness and Cognition, 65, 325-333.
• Xu, A., Cullen, B., Penner, C., Zimmerman, C., Kerr, C.E., Schmalzl, L. (2018)
- 2018 • **Dose-dependent effects of testosterone on spatial memory in adult male rats**
Psychoneuroendocrinology, 89, 120-130.
• Wagner, B., Braddick, V., Batson, C., Cullen, B., Miller, E. & Spritzer, M. (2018).

SELECTED POSTER PRESENTATIONS

- 2019 • **Cognitive versus affective predictors of craving**
Society for Personality and Social Psychology 
• Cullen, B., DeStasio, K., Cosme, D., & Berkman, E.T. (2019)
- 2019 • **Personalized stop-signal training to improve inhibitory control among adults who experienced early adversity**
Society for Personality and Social Psychology 
• DeStasio, K., Cullen, B., Shaffer, K., & Berkman, E.T. (2019)

- 2018
- **A pilot randomized control trial investigating brain-body mechanisms of Qigong meditative movement practice for cancer-related fatigue**
Society for Neuroscience Annual Meeting  San Diego, CA
 - Zimmerman, C., Penner, C., Temereanca, S., Daniels, D., **Cullen, B.**, Jones, S., & Kerr, C.
- 2017
- **Teacher effects in a school-based mindfulness intervention**
Mind and Life Summer Research Institute  Garrison, NY
 - **Cullen, B.**, Canby, N., & Britton, W. B.
- 2017
- **Sustained Attention in Focused Attention versus Open Monitoring Meditation: Behavioral and Neurophysiological Changes**
29th Association for Psychological Science Annual Convention  Boston, MA
 - Eichel, K., Essien, G., **Cullen, B.**, Rogers, A. & Britton, W.B.
- 2017
- **Dose-dependent effects of testosterone on spatial memory in young and adult male rats**
International Meeting for Steroids and the Nervous System  Turin, Italy
 - Spritzer, M.D., Batson, C.G., Braddick, V.C., Chyr, C.U., **Cullen, B.**, Goins, E.C., Jaeger, E.C.B., Miller, L.E., Super, C., & Wagner, B.A.
- 2016
- **An Open-Source System for EEG Neurofeedback and Transcranial Current Stimulation Control: Applications for Meditation Research**
International Symposium for Contemplative Studies,  San Diego, CA
Society for Neuroscience Annual Meeting
 - **Cullen, B.**, Santoyo, J., Black, C., McFarlane-Blake, C. & Kerr, C.
- 2016
- **A Neurofeedback Informed Meditation Technique (NIMT) for modulating posterior cingulate cortex activity—proof-of-concept for a novel mental-training paradigm with clinical applications**
International Symposium for Contemplative Studies,  San Diego, CA
Society for Neuroscience Annual Meeting
 - Santoyo, J., **Cullen, B.**, & Kerr, C.
- 2016
- **The role of social relationships in contemplative development**
Mind and Life Summer Research Institute  Garrison, NY
 - Canby, N., Margolis, C., **Cullen, B.**, Rahrig, H., Alejandra-Lara, A., Noorani, M., Lindahl, J. & Britton, W.
- 2016
- **The impact of social relationship factors on clinical outcomes in Mindfulness-Based Interventions**
Brown University Mind Brain Research Day  Providence, RI
Brown University Public Health Research Day
 - **Cullen, B.**, Rahrig, H., Dumais, T., Canby, N., Lindahl, J., & Britton, W.

- 2015 ● **Neurophysiological correlates of self-referential activity in meditators and non-meditators**
 Mind and Life Summer Research Institute  Garrison, NY
 • Cullen, B., Bruns, M., Paritsky, A., McGuirk, E., Ogle, T., Kimble, M., & Cronise, K.
- 2015 ● **Neurophysiological correlates of self-referential activity in meditators and non-meditators**
 Advances in Meditation Research  New York, NY
 • Cullen, B., Bruns, M., Paritsky, A., McGuirk, E., Ogle, T., Kimble, M., & Cronise, K.
- 2014 ● **Do expert meditators differ from novice and non-meditators in emotion identification, physiological competitive reactions, or prosocial responses?**
 Center for Compassion and Altruism Research and Education Science of Compassion Conference  San Francisco, CA
 • Cullen, B., Stallworthy, I., Lesenskyj, A., Boles, L., Weinert-Stein, M., Perceval, R., Kahn, H.; McGuirk, E., Sellers, J., & Cronise, K.
- 2014 ● **Effects of testosterone dose on spatial memory in adult male rats**
 Society for Neuroscience Annual Meeting  Washington, D.C.
 • Cullen, B., Spritzer, M., Batson, C., Spillane, S., & Wagner, B.

TALKS

- 2018 ● **Effects of focused attention and open monitoring meditation on error-related processing: Behavioral and neurophysiological changes**
 International Conference of the European Society for Cognitive and Affective Neuroscience  Leiden, Netherlands
 • Eichel, K., Cullen, B., & Britton, W.
- 2017 ● **Dismantling effects of focused attention and open monitoring techniques in Mindfulness-Based Cognitive Therapy for affective disturbances**
 Annual Meeting and Expo of the American Public Health Association  Atlanta, GA
 • Chang, B., Cullen, B., Kini, N., Rahrig, H., & Britton, W.
- 2016 ● **Movement, Embodiment and Interoception in the Context of Contemplative Practices**
 International Symposium for Contemplative Studies  San Diego, CA
 • Schmalzl, L., Powers, C., Yetz, N., Groessl, EJ., Saron, C., Kerr, C., Zimmerman, C., Cullen, B., Clark, D., Mostofsky, SH., Feinstein, J., Khalsa, S., Simmons, K., & Paulus, M.

2016

- Effects of focused attention and open monitoring meditation on sustained attention
International Symposium for Contemplative Studies  San Diego, CA
 - Eichel, K., Cullen, B., & Britton, W.



WORKSHOPS & TRAINING

2020

- [Introduction to Machine Learning with the Tidyverse](#)
rstudio::conf(2020)  San Francisco, CA
 - Two-day workshop on machine learning with tidymodels taught by Alison Hill



SERVICE & LEADERSHIP

2020

- Co-organizer
[Cascadia R Conf 2020](#)  Eugene, OR

2018

- Co-organizer
[Eugene Brainhack](#)  Eugene, OR

2018

- Science communication ambassador
[The People's Science](#)  Eugene, OR

2018

- Lab Tour Guide
Intel Science Fair  Eugene, OR

2016

- Co-organizer
Mindfulness, Healing and Empathy in Healthcare Speaker Series,
Warren Alpert Medical School at Brown University  Providence, RI