

# 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

- |                   |   |   |
|-------------------|---|---|
| 2022<br>I<br>2017 | <ul style="list-style-type: none"><li>● <b>PhD Student, Psychology</b><br/>University of Oregon<ul style="list-style-type: none"><li>• My research takes a translational (neuro)science approach toward predictive modeling of real-world health behaviors and health outcomes within a precision medicine framework.</li><li>• I am currently pursuing a 5-course <a href="#">Data Science Specialization</a> taught entirely in R, focused on data visualization, functional programming, and machine learning.</li></ul></li></ul> | <span style="color: #333399;">📍</span> Eugene, OR     |
| 2019<br>I<br>2017 | <ul style="list-style-type: none"><li>● <b>MS, Psychology</b><br/>University of Oregon<ul style="list-style-type: none"><li>• Thesis: Comparing cognitive and affective predictors of craving</li></ul></li></ul>   | <span style="color: #333399;">📍</span> Eugene, OR     |
| 2015<br>I<br>2011 | <ul style="list-style-type: none"><li>● <b>BA, Neuroscience</b><br/>Middlebury College<ul style="list-style-type: none"><li>• Thesis: Neurophysiological correlates of self-referential activity in meditators and non-meditators</li></ul></li></ul>   | <span style="color: #333399;">📍</span> Middlebury, VT |

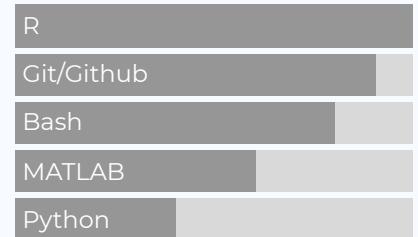
## 🏆 HONORS & AWARDS

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

## CONTACT

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## PROGRAMMING SKILLS



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

The source code is available at  
<https://bit.ly/2I6Cqyb>.

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  
|  
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  
|  
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  
|  
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](#).

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

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.

## 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