Thomas E. Gorman | CV

Cognitive Scientist | Data Scientist

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Education

2017 - May 2024	**University of Indiana - Bloomington** PhD in Psychology and Cognitive Science Dissertation: *The Role of Variability in Learning Generalization: A Computational Modeling Approach*
2011 - 2015	**University of Wisconsin Madison** B.Sc. in Psychology Thesis: *Short-term mindfulness intervention reduces the negative attentional effects associated with heavy media multitasking*

Experience

Percepts and Concepts Lab

- PhD Student (2017 - Present)
- Principal Investigator: Robert Goldstone, PhD

Learning and Transfer Lab (University of Wisconsin-Madison)

- Lab Manager / Research Coordinator (2015-2017)
- Undergraduate Research Assistant (2013 - May 2015)
- Principal Investigator: C. Shawn Green, PhD

Alexander Lab – Medical Physics (University of Wisconsin-Madison)

- Research Coordinator (2015 – 2017)
- Principal Investigator: Andrew Alexander, PhD

Center for Healthy Minds (University of Wisconsin-Madison)

- Undergraduate Research Assistant (January 2014 - May 2015)
- Principal Investigator: Richard J. Davidson, PhD

Skills

Category	Skills
Programming	- R (Quarto, Rmarkdown, Shiny) - JavaScript - Python (jupyter, torch, tensorflow) - Bash (Shell scripting, Workflow automation) - MATLAB (psychtoolbox)
Computational Modeling	- Artificial Neural Networks - Bayesian Statistics - Mixed Effect Models - Dimensionality Reduction & Similarity Scaling - Approximate Bayesian Computation - Individual Differences
Data Analysis	- Multilevel Modeling - Bayesian Statistics - ANOVA; t-test; regression - Mixed Effects Models - Dimensionality Reduction
Experimental Skills	- Behavioral Tasks - Online Data Collection (jsPsych for web-based experiments) - Survey Data Collection (Qualtrics) - Mechanical Turk - MRI & EEG
Workflow Automation & Version Control	- Multi-language workflows (integrating R, Bash, Python) - Git (Documentation, backup, branching, collaboration)
Tools	- RStudio - VS Code - Vim/Neovim
Miscellaneous Skills	- Web Scraping - SQL - Website Design

Journal Articles and Conference Proceedings

- **Gorman**, T. E., & Goldstone, R. L. (in progress). Impact of Training Variability on Visuomotor Function Learning and Extrapolation. link
- **Gorman**, T. E., & Goldstone, R. L. (2022). An instance-based model account of the benefits of varied practice in visuomotor skill. *Cognitive Psychology*, *137*, 101491.
- Bazyldo, A., Kecskemeti, S., Cochrane, A., **Gorman**, T., Rokers, B., Dean, D., Green, C. S., & Alexander, A. L. (2021). Assessment of R1 Relaxometry Changes Induced via Repeated Videogame Training as a Measure of Neuroplasticity in College-aged Brains. In Proceedings of the ISMRM & SMRT Annual Meeting & Exhibition. An Online Experience. link
- Patrick, A., Dean, D., **Gorman**, T., Green, C. S., & Alexander, A. (2019). Assessment of Microstructural Changes Induced via Repeated Videogame Training as a Measure of Neuroplasticity in Normal Developing, College-age Brains. In Proceedings of the 27th Annual Meeting & Exhibition of the International Society for Magnetic Resonance in Medicine. Montréal, QC, Canada. link
- Dean, C. D., Patrick, A. M., **Gorman**, T., Green, C. S., & Alexander, A. L. (2018). Neuroplastic Changes of Myelin Microstructure With Video Game Play. In Proceedings of the Joint Annual Meeting ISMRM-ESMRMB. Paris, France. link

- Kattner, F., Cochrane, A., Cox, C. R., **Gorman**, T. E., & Green, C. S. (2017). Perceptual learning generalization from sequential perceptual training as a change in learning rate. *Current Biology*, *27*(6), 840-846.
- **Gorman**, T.E., & Green, C.S. (2016). Short-term mindfulness intervention reduces the negative attentional effects associated with heavy media multitasking. *Scientific Reports*, *6*.

Reviews and Book Chapters

- **Gorman**, T.E., Gentile, D.A., & Green, C.S. Problem gaming: a short primer (2018). *American Journal of Play*, *10* (3), 309-327
- **Gorman**, T.E., & Green, C.S. (2017). Young minds on video games. In *Cognitive development in digital contexts*. 121-143. Academic Press.
- Green, C. S., **Gorman**, T., & Bavelier, D. (2016). Action Video-Game Training and Its Effects on Perception and Attentional Control. In *Cognitive Training* (pp. 107-116). Springer International Publishing.

Presentations

- Half Day Tutorial on Measuring Mindfulness Behaviorally: Onsite/Online Data Col-lection with jsPsych
  - Cognitive Science Conference – 2018
- Does interleaving go the distance? Exploring the effect of dissimilarity on interleaved category learning
  - Math Psych/ICCM 2018
- Short term mindfulness intervention reduces cognitive deficits in heavy media multi-taskers
  - Undergraduate Research Symposium – UW-Madison – April 16th, 2015

Awards

IU-Bloomington – Development Training Grant – beginning Fall 2019
IU-Bloomington - Steinmetz Summer Research Award - 2018
UW-Madison - Undergraduate Research Scholar Award – 2015
UW-Madison - Hilldale Undergraduate/Faculty Research Fellowship – 2014

Ad-hoc Reviewer

Cognitive Science
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Human Perception and Performance
Contemporary Educational Psychology

Conferences

Cognitive Science Conference - 2021
Cognitive Science Conference - 2018
Mathematical Psychology & ICCM 2018
Boston Meeting on Methods in Cognitive Training (NSF Sponsored) – May 2017