# Thomas E. Gorman | Resume

Data Scientist | Cognitive Scientist

Department of Psychological and Brain Sciences
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Recent PhD graduate in Cognitive Science and Psychology with a focus on data-driven research and computational modeling. Expertise in experimental design, data collection, and advanced statistical analysis, including mixed-effects modeling and Bayesian inference. Proficient in R for data manipulation, visualization, and machine learning implementations. Experienced in developing and fitting cognitive models to empirical data, with a focus on learning and decision-making processes. Skilled in working with large datasets, including behavioral and neuroimaging data. Eager to apply strong quantitative skills and research experience to solve complex data science challenges.

## Experience

**Percepts and Concepts Lab, Indiana University Bloomington | PhD Student | 2017 - 2024**

- Utilized advanced statistical methods (e.g., Bayesian mixed effects models, approximate Bayesian computation) to analyze and interpret complex datasets.
- Designed and conducted behavioral experiments across various domains, including visuomotor skill learning, category learning, and decision-making.
- Developed and implemented computational models (e.g., instance-based models, connectionist models) using R to simulate human behavior and test theoretical predictions.
- Authored and co-authored peer-reviewed publications and presented research findings at conferences.

**Learning and Transfer Lab, University of Wisconsin-Madison | Lab Manager / Research Coordinator | 2015 - 2017**

- Managed all aspects of lab operations, including participant recruitment, data collection, data analysis, and IRB compliance.
- Supervised and trained undergraduate research assistants on experimental protocols, data entry, and analysis procedures.
- Contributed to the design and implementation of behavioral experiments investigating perceptual learning, attention, and cognitive training.

## Skills

**Research Methods:** Experimental Design, Quantitative Research (e.g., Surveys, Experiments), Data Collection (Online & In-Lab), Data Analysis (R, Python), Statistical Modeling (Bayesian, Frequentist), Literature Reviews, IRB Compliance
**Programming Languages:** R (Quarto, R Markdown, Shiny), Python (Jupyter, TensorFlow, PyTorch), JavaScript (jsPsych), Bash, MATLAB (Psychtoolbox)
**Software & Tools:** Git, GitHub, RStudio, VS Code, MySQL, Qualtrics, Mechanical Turk
**Other Skills:** Scientific Writing, Data Visualization, Presentation Skills, Project Management

## Education

**Indiana University Bloomington | PhD in Cognitive Science and Psychology | 2017 - 2024**
**University of Wisconsin-Madison | B.Sc. in Psychology | 2011 - 2015**

## Selected Publications

Gorman, T. E., & Goldstone, R. L. Impact of Training Variability on Visuomotor Function Learning and Extrapolation. pdf
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.
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.

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