ZACHARY M. HIMMELBERGER

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QUALIFICATION HIGHLIGHTS

- Extensive training in applied statistical analysis and statistical programming (primarily with R and python)
- Experienced researcher with multiple publications, statistical workshops led, and numerous professional conference presentations
- Published or presented research using Bayesian modeling, multilevel modeling, general linear modeling, path analysis, and factor analysis
- Demonstrated experience in study and survey design, data analysis, statistical consulting, executive results interpretation, and reporting
- College-level educator with strong oral and written communication skills
- Supervised and trained numerous students and professionals in statistics and research methodology

EDUCATION

Doctorate of Philosophy in Experimental Psychology, The University of Alabama *2018*
Focuses in Cognitive Psychology, Developmental Science, and Statistics
Dissertation: The Acquisition of Survey Knowledge across Repeated Exposures to a Novel Environment in Individuals with Down Syndrome

Master of Arts in Experimental Psychology, The University of Alabama *2015*
Master's Thesis: Processing Spatial Relations: The Role of Instructions on the Priming of Egocentric and Allocentric Spatial Representations

Bachelor of Arts in Psychology, Rivier College *2012*
Honor's Thesis: The Testing Effect in the Classroom

EXPERIENCE

Lecturer in Psychology, Maryville College, Maryville, TN *2017-present*

- Consulted with the Associate Dean, Career Center, faculty, and students on data analysis, statistical programming, and analytical reporting.
- Taught courses and held workshops in statistics, research methodology, and programming in R.
- Maintained a research lab, taught courses, advised students, mentored student research, served on committees, and provided additional service to the department and college.

Graduate Research Assistant, The University of Alabama, Tuscaloosa, AL *2012-2017*

- Effectively collaborated with colleagues on several research projects and using a range of methodologies.
- Collected, managed, and analyzed data from surveys and behavioral experiments that I helped design.
- Trained and supervised undergraduate and graduate research assistants on a large, federally funded grant, as well as other concurrent research projects.

PUBLICATIONS

Yang, Y., **Himmelberger, Z.M.**, Robinson, T., Davis, M., Conners, F., & Merrill, E. (2021). Everyday memory in people with Down syndrome. *Brain Sciences, 11* (551), 1-15. doi: 10.3390/brainsci11050551

Faught, G.G., **Himmelberger, Z.M.**, Conners, F.A., & Tungate, A. S. (2020). Sustained Attention to Response Task Performance Trajectories in Down Syndrome. *Journal of Intellectual Disability Research*, 1-6. doi:10.1111/jir.12805

Lewis, J., **Himmelberger, Z.M.**, & Elmore, J.D. (2020). I Can See Myself Helping: The Effect of Self-Awareness on Prosocial Behavior. *International Journal of Psychology*, 56(5), 710-715. doi:10.1002/ijop.12733

Himmelberger, Z.M., Merrill, E.C., Conners, F.A., Roskos, B., Yang, Y., & Robinson, T. (2020). The Acquisition of Survey Knowledge by Individuals with Down syndrome. *Frontiers in Human Neuroscience, 14*(256), 1-17. doi:10.3389/fnhum.2020.00256

Faught, G.G., Conners, F.A., & **Himmelberger, Z.M.** (2016). Auditory and visual sustained attention in Down syndrome. *Research in Developmental Disabilities, 53*, 135-146. doi:10.1016/j.ridd.2016.01.021

MANUSCRIPTS IN PREPARATION/REVIEW

A complete draft of each project is available for review upon request.

Himmelberger, Z.M., Faught, G.G., Tungate, A., Conners, F.A., & Merrill, E.C. (revision under review in the *International Journal of Developmental Disabilities*) Personality Traits Predicting Attitudes toward Individuals with Intellectual Disability

Sherwood, J.A., Lewis, J.A., Elmore, J.D., & **Himmelberger, Z.M.** (under review in *Violence and Victims*) The leprous nature of victim status: Victimization decreases social desirability

Himmelberger, Z.M., Coyle, E., & Leonard, T. (manuscript in preparation) The Relationship between Contact and Social Comfort around Individuals with Intellectual Disabilities

Himmelberger, Z.M., Bagci, M., Merrill, E.C., & Roskos, B. (manuscript in preparation) The Effect of Landmark Saliency on Route and Landmark Learning Trajectories

WORKSHOPS

Himmelberger, Z., & Johnson, A.R. (2021, March) Applied Multilevel Modeling with Longitudinal Data. Workshop given at the Annual Meeting of the Southeastern Psychological Association.

Himmelberger, Z., & Johnson, A.R. (2020, June) An Introduction to Multilevel Modeling. Workshop given at the Annual Meeting of the Southeastern Psychological Association.

Himmelberger, Z., & Johnson, A. R. (2018, April) Introduction to R. Workshop given to students, faculty, and staff at Maryville College.

SAMPLE PROJECTS

Image Classification for Financial Technical Indicators

- Created a sample of financial time-series images (candlestick charts and line graphs) and developed a machine learning image classification algorithm to identify previously labeled technical indicators used in financial trading (e.g., relative strength index)
- This project is designed as an open-source, approximate replication of a study conducted by researchers at a large financial institution

- Stored the data in an AWS s3 bucket and used H2O AI to build the machine learning models

Wayfinding in Individuals with Down syndrome

- Designed and published a study to investigate spatial ability in individuals with Down syndrome, including designing a virtual environment and programming a cognitive task
- Wrote a Python script to automate the processing and summarizing of a memory task
- Used a multilevel modeling framework to analyze repeated trials nested within individuals

Consultation with Maryville College Career Center

- Trained and supervised student research assistants in the Data Science Lab to assist the Career Center in analyzing results from several years worth of career outcome data
- Organized and processed the dataset using reproducible R scripts
- Interpreted and graphed data to assist administrative decision making, and contributed to future data collection procedures

RECENT PROFESSIONAL DEVELOPMENT

WorldQuant University Applied Data Science Module *2021*
Machine Learning & Statistical Analysis (with honors)

WorldQuant University Applied Data Science Module *2021*
Scientific Computing & Python (with honors)

Bayesian Data Analysis *2021*
Course taught by Aki Vehtari (GSU, 2021)

TECHNICAL PROGRAMS

Data Analysis	R, Stan, SPSS, SAS
Programming	Python, JavaScript
Presentation	LaTeX(Beamer), Rmarkdown, Microsoft PowerPoint
Other Tools	SQL, Microsoft Excel, Qualtrics