

Ryan Faulkner

faulknerryan72@yahoo.com | 945 Center Dr, Gainesville, FL 32603 | 1 (727) 771-5247

Research Interest

My primary research interest is using neuroimaging and computational modeling to understand the neurobiology of and behavioral tendencies in learning and decision-making. More specifically, I want to use EEG/(f)MRI (both synchronously and asynchronously) to understand learning and dynamic decision-making especially involving incomplete information in neurotypical and neurodivergent populations. I am also interested in advancing methodological approaches to better integrate and analyze multimodal data in these contexts.

Education

B.S. Psychology (Behavioral/Cognitive Neuroscience focus) May 2023

University of Florida, Gainesville, FL

Senior Thesis: Possibility of Misrepresentation in Saccadic Change Blindness (Summa Cum Laude)

B.A. Philosophy, University of Florida, Gainesville, FL (*Cum Laude*) May 2023

University of Florida, Gainesville, FL

Relevant Coursework

(* denotes an audited graduate level course)

- 🔗 Neuroimaging Applications and Analysis
- 🔗 Laboratory in Cognitive Neuroscience
- 🔗 Psychological and Behavioral Modeling*
- 🔗 fMRI Methods*
- 🔗 Programming with Data in R
- 🔗 Measurement, Research Design, and Statistics 1*
- 🔗 Measurement, Research Design, and Statistics 2*
- 🔗 Applied Multivariate Methods*

Research Experience

Lab Manager Spring 2024 – Present

Social Cognitive and Affective Development Laboratory

Primary Investigator: Dr. Natalie Ebner, PhD

University of Florida – Department of Psychology

- 🔗 Conducted experimental data collection sessions with participants
- 🔗 Managed multimodal back-up and pre-processing using HiPerGator
- 🔗 Recruited, scheduled and pre-screened participants
- 🔗 Coordinated data sharing with international collaborators and OpenNeuro
- 🔗 Presented posters at local, national, and international conferences and delivered a talk to retired UF faculty
- 🔗 Trained RAs, gave workshops, and developed protocol for pre-processing multimodal data
- 🔗 Managed lab website

Lab Manager Fall 2022 – Fall 2022

Perception Attention and Consciousness Laboratory

Primary Investigator: Dr. Brian Odegaard, PhD

University of Florida – Department of Psychology

- 🔗 Recruited, scheduled and pre-screened participants
- 🔗 Conducted experimental data collection sessions with participants
- 🔗 Coded analyses using Python (numpy, pandas, matplotlib, seaborn, tensorflow, scipy)
- 🔗 Prepared stimuli for follow-up experiment
- 🔗 Piloted tasks for graduate students
- 🔗 Presented data at local and international conferences

Undergraduate Research Assistant Spring 2023 – Fall 2023

Perception Attention and Consciousness Laboratory

Primary Investigator: Dr. Brian Odegaard, PhD

University of Florida – Department of Psychology

- ☛ Pre-processed and analyzed eye-tracking and behavioral data using Python
- ☛ Managed and conducted experiment sessions using PsychoPy and eye-tracking
- ☛ Presented data at local conferences
- ☛ Piloted experiments for senior personnel
- ☛ Managed participants using undergraduate psychology student SONA program

Undergraduate Research Assistant

Spring 2023 – Fall 2023

Quantitative Aging and Neurocognitive Training Laboratory

Primary Investigator: Dr. Michael Marsiske, PhD

University of Florida – Department of Clinical and Health Psychology

- ☛ Coordinated and conducted neurocognitive training sessions for older adults
- ☛ Developed Canvas course to administer neurocognitive training sessions for older adults
- ☛ Trained RAs on administering neurocognitive training measures
- ☛ Assisted with participant recruitment and pre-screening

Publications

Frei, V., Lighthall, N., **Faulkner, R.**, Lighthall, N., Ebner, N.C., The Social Iowa Gambling Task: A Promising Tool for Assessing Deception Detection in Real-world Contexts in Adulthood (under review)

Hung, C.C., Lin, T., **Faulkner, R.**, Polk, R., Ebner, N.C., The role of social white matter tracts in susceptibility to phishing in aging (in prep)

Lee, I., Sans, S., Lee, A., Ng, L., **Faulkner, R.**, Haun, A., Chesney, D., Rosenthal, D., Fallon, F., Odegaard, B., Replicating and Extending the Work of John Grimes. (under review)

Maynes, R., **Faulkner, R.**, Callahan, G., Mims, C. E., Ranjan, S., Stalzer, S., Odegaard, B., (2023). Metacognitive Awareness in the Sound-Induced Flash Illusion. *Philosophical Transactions of the Royal Society B*. <https://doi.org/10.1098/rstb.2022.0347>

Invited Talks

Faulkner, R., Washburn, S.R., Barnas, A. J., Lin, T., Ebner, N. C. “The Role of Age in Deepfake Detection Accuracy”. (March, 2025). Talk at the 2025 Levitt Award for Student Research on Aging. Gainesville, FL, USA.

Presentations

Hayes, A., Lin, T., Alluri, M., **Faulkner, R.**, Lighthall, N. & Ebner, N. C. (May, 2025). “Novel real-time fMRI neurofeedback training to enhance trust-related decision making in aging”. Poster at the Florida Consortium on the Neurobiology of Cognition, Orlando, FL, USA.

Park, S., Lin, T., **Faulkner, R.**, Heemskerk, A., Ebner, N.C. (May, 2025). “Feeling the Truth but Falling for the Lie: Age Differences in Physiological Arousal to Deception”. Poster at the Florida Consortium on the Neurobiology Of Cognition, Orlando, FL, USA.

Washburn, S.R., **Faulkner, R.**, Barnas, A. J., Lin, T., Ebner, N. C. (April, 2025) “Understanding Age Differences in Deepfake Image Detection”. Poster at the 2025 Center for Cognitive Aging and Memory Clinical Translational Research Day Conference. Gainesville, FL, USA.

- Faulkner, R.**, Washburn, S.R., Barnas, A. J., Lin, T., Ebner, N. C. (March, 2025) “The Role of Age in Deepfake Detection Accuracy”. Poster at the 2025 Levitt Award for Student Research on Aging. Gainesville, FL. USA.
- Washburn, S.R., Barnas, A. J., **Faulkner, R.**, Lin, T., Ebner, N. C. (February, 2025) “The Role of Age in Deepfake Detection Accuracy”. Poster at the Dallas Aging and Cognition Conference. Dallas, TX, USA.
- Arnold, D., Pehlivanoglu, D., **Faulkner, R.**, Zhen, J., Lin, T., El-Shafie, D., Zhu, M., Woodard, D., Cahill, B., Ebner, N. C. (May, 2024) “Is this Real? Age-Related Differences in Deep-Fake Detection”. Poster at the Florida Consortium on the Neurobiology of Cognition. Miami, FL, USA.
- Faulkner, R.**, Pehlivanoglu, D., Zhen, J., Lin, T., El-Shafie, D., Zhu, M., Woodard, D., Cahill, B., Ebner, N.C. (April, 2024) “Is this Real? Age-Related Differences in Deep-Fake Detection”. Poster at the Social and Affective Neuroscience Society Annual Meeting. Toronto, Ontario, Canada.
- Odegaard, B., Lee, A., Lee, I., **Faulkner, R.**, Sans, A., Ng, L., Haun, A., Chesney, D., Rosenthal, D., Fallon, F. (June, 2023) “None so blind: Meaningful Changes are More Detectable Across Saccade-Induced Change Blindedness”. Talk at Association for the Scientific Study of Consciousness Annual Meeting. New York City, New York, USA.
- Odegaard, B., Lee, I., Lee, A., Sans, A., Ng, L., **Faulkner, R.**, Haun, A., Chesney, D., Rosenthal, D., Fallon, F. (May, 2023) “The Influence of Semantics and Scene Congruence on Visual Change Detection During Saccades”. Poster at the Vision Sciences Society Annual Meeting. St. Petersburg, Florida, USA.
- Faulkner, R.**, Odegaard, B., Lee, A., Lee, I., Sans, A., Ng, L., Haun, A., Chesney, D., Rosenthal, D., Fallon, F. (April, 2023) “Possibility of Misrepresentation in Saccadic Change Blindness”. Poster at the Psychology Graduate Student Organization Symposium, Undergraduate Research Symposium. Gainesville, Florida, USA.
- Taylor, B., Owens, J., **Faulkner, R.**, Verdone, M., Willis, Shelly L., Marsiske, M. (February, 2023) “Feasibility and Effectiveness of a Telehealth-Delivered Inductive Reasoning Training Program for Older Adults”. Poster at the International Neuropsychological Society Annual Meeting. San Diego, California, USA.

Teaching Experience

Undergraduate Teaching Assistant Fall 2023
Applied Behavioral Analysis
 Instructor: Davis Simmons (Supervisor: Dr. Nicole Gravina PhD)

Workshops Given

Introduction to HiPerGator, Linux and Bash Fall 2025
 Department of Psychology
 University of Florida

HiPerGator and MRI Fall 2025
 Department of Psychology
 University of Florida

MRI Basics Fall 2025
 Department of Psychology
 University of Florida

Pre-Processing MRI Data Part 1
Department of Psychology
University of Florida

Pre-Processing MRI Data Part 2
Department of Psychology
University of Florida

Fall 2025

Workshops Attended

AI Agents for Research

UF IT Research Computing
University of Florida
Speakers: Qian Zhao, Minh Nguyen PhDs

Fundamentals of Accelerated Data Science

NVIDIA Deep Learning Institute
University of Florida
Speaker: Chin Zhao PhD

Fall 2025

Fundamentals of Deep Learning

NVIDIA Deep Learning Institute
University of Florida
Speaker: Van Minh Nguyen PhD

Fall 2025

Getting Started with AI

UF IT Research Computing
University of Florida
Speaker: Matt Gitzendanner PhD

Summer 2025

Computing for AI

UF IT Research Computing
University of Florida
Speaker: Matt Gitzendanner PhD

Summer 2025

Python for AI

UF IT Research Computing
University of Florida
Speaker: Matt Gitzendanner PhD

Summer 2025

Deep Learning Foundations

UF IT Research Computing
University of Florida
Speaker: Matt Gitzendanner PhD

Summer 2025

ERP and Machine Learning Workshop

SparkNeuro
Center for Cognitive Aging and Memory, Department of Psychology
University of Florida
Speaker: Dr. Keith Yoder PhD

Spring 2025

Missing Data Analysis: Why and How	Spring 2025
Department of Psychology, Center for Cognitive Aging and Memory University of Florida Speaker: Dr. Joerg Luedicke PhD	
Computational Modeling Workshop 2024	Summer 2024
Scientific Research Network on Decision Neuroscience and Aging University of Pennsylvania Speakers: Drs. Krishna Bera, Alana Jaskir, Angela Radulescu, Gregory Samanez-Larkin, Robert Wilson, and Debbie Yee PhDs	
Computational Modeling using MatLab	Spring 2024
Department of Psychology University of Florida Speaker: Dr. Robert Wilson PhD	
Git and GitHub Workshop	Spring 2024
University of Florida Research Computing University of Florida Speaker: Dr. Matt Gitzendanner PhD	

Awards and Recognitions

Scientific Research Network on Decision Neuroscience in Aging Travel Award (travel and lodging)	Summer 2024
Institute for Learning in Retirement/UF Aging Science Award Best Poster Finalist (\$200)	Spring 2024
Institute for Learning in Retirement/UF Aging Science Award Poster Award (\$50)	Spring 2024
Beyond120 Experiential Research Scholarship (\$750)	Summer 2023
Psychology Graduate Student Organization Research Symposium Best Poster Runner-Up	Spring 2023
Countryside High School Valedictorian	Spring 2020
Florida Sunshine State Scholar	Fall 2019

Professional Affiliations

2023 – 2024	Social and Affective Neuroscience Society
2022 – 2023	Vision Sciences Society

Skills

Coding Languages: Python (pytorch, pandas, numpy, matplotlib), R (ggplot, psych, olsrr, lavaan, lme4, nlme, lmerTest, olsrr), HTML

Statistical Analysis: Regression, (M)AN(C)OVA, MLM, Chi-Square, PCA, EFA, CFA

MRI Data Pre-processing: dcm2bids, pydeface, mri_info, recon-all, fmriprep, tedana, antsApplyTransforms, fslmaths

MRI Analysis: CONN, SPM12

Experiment Development: E-Prime, EyeLink Experiment Builder, REDCap, Qualtrics, Pavlovia, PsychoPy

Data pre-processing: AcqKnowledge 5.0, EyeLink Data Viewer