

# WILLIAM THYER

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## EDUCATION

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- 2023      **PhD Integrative Neuroscience, Psychology**  
University of Chicago, Institute for Mind and Biology
- 2017      **BS Psychology, Minor in Statistics, cum laude**  
Florida State University

## EXPERIENCE

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- Present      **Graduate Researcher**, Awh & Vogel Lab, University of Chicago
- Collecting human electroencephalogram (EEG), eye tracking, and behavior
  - Preprocessing and statistical analysis of human behavioral and EEG data
  - “Decoding” of cognitive states from EEG with Scikit-Learn
  - Writing publications in peer-reviewed journals such as *Journal of Neuroscience*
- 2021      **Data Science Intern**, Spark Neuro
- Developing machine learning models for diagnosis of neurological disorders with random forest and XGBoost
  - Creating custom 3D interactive visualizations of neural data
  - Utilizing AWS cloud services and parallel processing with large datasets

## RELEVANT ACADEMIC PROJECTS

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### **Decoding Working Memory States from Human Neural Data**

- Collected and processed over 100 sessions of human EEG, eye tracking, and behavior
- Built machine learning models to classify working memory states from EEG
- Submitted an academic article to a peer-reviewed journal (currently under review)
- Tools used: Python, Scikit-Learn, MNE, Scipy, Matplotlib, Pandas, Git

### **EEG and Eye Tracking Preprocessing and Artifact Rejection Pipeline**

- Integrated eye tracking, EOG, and EEG artifact rejection
- Improved useability by developing generated reports after processing
- Tools used: EEGLAB, EYE-EEG, ERPLAB, Matlab, Git

### **Technical Skills Student Group, Machine Learning Leader**

- Led student group that focused on machine learning and programming
- Held work sessions to improve students’ machine learning skills
- Tools used: Python, Scikit-Learn, Matplotlib

### **Project Manager for Visual Memory Tracker App on iOS and Android**

- Coordinated a team of researchers, testers, and developers
- Communicated complex research goals to outside developers
- Organized data collection and app testing

## TEACHING

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- 2020      **Psychological Research Methods**, Teaching Assistant
- 2020      **Attention and Memory in the Mind and Brain**, Teaching Assistant