# William Thyer, PhD

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## Education

**PhD Integrative Neuroscience, Psychology**                                   2023
University of Chicago, Institute for Mind and Biology                         Chicago, IL

**BS Psychology, Minor in Statistics**                                        2017
Florida State University                                                     Tallahassee, FL

## Work Experience

**Senior Data Scientist** (*formerly Data Scientist I, Data Scientist II*)    August 2023 - Current
Cohere Health                                                                 Remote

- Oversaw maintenance and enhancement of 19 production ML models automating prior authorization, preventing over $300K in monthly operational costs and saving thousands of patient hours per day.
- Led and mentored a co-op data scientist to build a robust anomaly detection and data quality pipeline with PySpark, Airflow, and Git-based CI/CD, surfacing 10+ critical production issues monthly.
- Coordinated several cross-functional teams to expand ML model coverage to a new clinical area, resulting in 1000s of auto-approvals and preventing >$100,000 in operational expenses per month.
- Developed a *patient profile* data asset, establishing a centralized, rich, and accessible source of patient information that delivers hundreds of features for production ML jobs and Tableau dashboards.

**Graduate Researcher**                                                       July 2018 - July 2023
Awh & Vogel Lab, University of Chicago                                         Chicago, IL

- Collaborated with researchers on projects resulting in publications in high-impact peer-reviewed journals.
- Lead development of an open-source machine learning library for neural time series analysis with Python, Scikit-Learn, and Matplotlib, which is now used by more than 5 researchers.
- Built, tested, and deployed a data processing pipeline that improved useability and overall infrastructure which is now used by 2 research labs.

**Data Scientist Intern (Full-Time)**                                         June 2022 - September 2022
Intuitive Surgical                                                            Atlanta, GA

- Researched machine learning-based feedback systems for surgeons during robotic surgeries, leading to improved understanding of potential future applications.
- Trained machine learning models on multivariate time series data with Scikit-Learn and TSFresh.
- Applied unsupervised clustering methods to improve model interpretability, providing insights into model performance and improving feedback systems.

**Data Scientist Intern (Full-Time)**                                         July 2021 - December 2021
Spark Neuro                                                                    Remote

- Trained XGBoost models on biomedical time series data for the diagnosis of neurological disorders, improving accuracy and specificity of the diagnosis processes.
- Created 3D interactive visualizations of neural data which increased interpretability of medical reports.
- Utilized AWS cloud services and parallel processing techniques to efficiently process large datasets, reducing computation time and improving data analysis efficiency.

## Skills

**Languages/Platforms:** Python, SQL, MATLAB, SAS, pyspark, Airflow, AWS, git, Tableau

**Libraries:** Scikit-Learn, Fastai, PyTorch, TSFresh, TSAI, Matplotlib, Seaborn, Numpy, Pandas, Scipy, Flask

**Skills:** Machine learning, statistical analysis, ML production and monitoring, project management