Andrew E. Worthy

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EDUCATION

Emory University, Laney Graduate School **Atlanta, GA**
Doctor of Philosophy, Neuroscience Expected May 2027
Cumulative GPA: 4.0/4.0
Focus Areas: Data Science for Neuroscientists, Statistical Modeling, Signals Processing
Honors & Awards: NIH Training Grant (T32), Integrative Neuroscience, 2024–2025

Emory University, Emory College of Arts and Sciences **Atlanta, GA**
Bachelor of Science, Biology; Bachelor of Arts, Chemistry May 2020
Cumulative GPA: 3.8/4.0, *Summa Cum Laude*

WORK EXPERIENCE

Emory University, School of Medicine **Atlanta, GA**
Graduate Researcher, Systems Neuroscience 2023 – Present

- Build and maintain end-to-end data analysis workflows in Python and R, including data cleaning, feature extraction, statistical analysis, and visualization
- Write substantial custom Python code to process large, noisy time-series datasets and automate analysis pipelines tied to real-world data acquisition systems
- Apply statistical modeling and exploratory data analysis (e.g., regression, generalized linear models) to compare conditions and identify meaningful patterns across large datasets
- Analyze high-dimensional human- and animal-derived gene expression datasets in R using modern data science tools for quality control, clustering, differential analysis, and summary reporting
- Partner with cross-functional teams to integrate metadata, ensure reproducible analyses, and communicate results clearly to audiences without technical or domain expertise

Graduate Teaching Assistant, Introduction to Neurobiology 2024

- Explained complex technical concepts to diverse audiences through presentations and hands-on demonstrations
- Led problem-solving sessions emphasizing quantitative reasoning and data interpretation
- Delivered an independent lecture on spinal reflexes, incorporating live EMG demonstrations

Lead Research Specialist, Department of Cell Biology 2020 – 2023

- Led quantitative analysis for multiple projects involving imaging, electrophysiology, and molecular datasets
- Built and maintained reusable analysis scripts in Python and MATLAB to support team-wide data processing
- Managed complex experimental datasets and ensured data integrity across long-running projects
- Mentored junior researchers on data analysis best practices and interpretation of results

TECHNICAL SKILLS

Programming & Data Analysis: Python (pandas, NumPy, matplotlib, scikit-learn), R (tidyverse, statistical modeling), MATLAB, Git, Jupyter, Excel, SQL, Tableau
Statistics & Modeling: Exploratory data analysis, GLMs, regression, hypothesis testing, time-series/signal analysis
Data Workflows: Data cleaning, QC; version-controlled scripts for automated, reproducible analysis pipelines
Domain Experience: Large experimental datasets, noisy real-world data, quantitative modeling

ADDITIONAL INFORMATION

Publications: Peer-reviewed publications in *eLife* and *FEMS Microbiology Ecology* (Google Scholar)
Other Skills: Spanish; technical communication; presenting analytical results to non-technical audiences
Interests: Cooking, Gardening, Aviation, Travel, Guitar