DOMENIC **CERRI**

DATA SCIENTIST

CONTACT

 Chapel Hill, NC

Portfolio
LinkedIn
GitHub

SKILLS

Python (NumPy, Pandas, SciPy, Scikit-learn, Keras, Matplotlib, Seaborn)

Statistical Analysis (SAS, SPSS, Statistica)

SQL (SQLAlchemy, Postgres)

Bash

Git

Jupyter Notebook & Colab

HTML & CSS

MS Office (Excel / VBA, Word, Powerpoint, Teams)

Project Management

Scientific Communication

EDUCATION

PhD 2016

Behavioral Neuroscience

Neurobiology (minor)

UNC Chapel Hill

BA 2008

Psychology (4.1 GPA)

McDaniel College

CERTIFICATIONS

freeCodeCamp   2022

Machine Learning

Data Analysis with Python

Scientific Computing

Relational Database

Responsive Web Design

PUBLICATIONS

EXPERIENCE

Research Scientist / Postdoctoral Associate 2016 – Present

Center for Animal MRI / UNC Chapel Hill

- Develop and implement data wrangling, analysis, and visualization pipelines for preclinical 4D fMRI and multimodal time series data using Python, bash scripting, and specialized software packages
- Collaborate with machine learning experts for fMRI data dimensionality reduction, segmentation, and modeling
- Write C++ and state-notation scripts to synchronize experimental measurement and manipulation hardware systems, including: animal behavior, fMRI, optogenetics, chemogenetics, DBS, photometry, acute pharmacology, electrophysiology, and electrochemistry
- Direct a large-scale, multicenter project to identify neurochemical influences on neurovascular coupling
- Supervise and mentor research technicians and graduate students on lab protocols, data analysis, and scientific writing
- Communicate original research findings to internal and external audiences in formal presentations, which have earned multiple awards at international conferences
- Contributed to the conceptualization and writing of more than five peer-reviewed publications and two multimillion-dollar federal grants

Graduate Research Assistant 2010 – 2016

Dept. of Psychology & Neuroscience / UNC Chapel Hill

- Conducted research projects from start to finish, leading to a federal grant covering three years of salary, four poster presentations at international conferences, and a first-author publication
- Developed and taught a full-semester course on behavior theory to UNC Chapel Hill undergraduates, receiving positive reviews
- Created and implemented semi-automatic pre-processing and analysis pipelines for animal electrophysiology time series and quantitative behavior data using MATLAB, proprietary scripting languages, and Visual Basic in Excel
- Wrote C++ and proprietary state-notation scripts for low-latency, synchronized control and monitoring of I/O hardware systems

Laboratory Technician 2009 – 2010

Dept. of Anatomy & Neurobiology / University of MD, Baltimore

- Collected and pre-processed electrophysiology time series and quantitative and qualitative animal behavior and histology data
- Contributed to five peer-reviewed publications, four conference abstracts, and presented a poster at an international conference
- Updated I/O controller hardware and MS-DOS C scripts for low-latency control and monitoring of animal behavior to run on Windows XP using C++ and high-priority threads