Carlos Johnson-Cruz, PhD

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WORK EXPERIENCE

University of California, San Francisco — San Francisco, CA

Neuroscience Research Scientist — Sep. 2024 – Present

- Develop and iterate Python machine learning models to quantify information encoding in 1TB+ of neuroimaging time-series data using classification and clustering
- Build ETL data pipelines in Python to optimize model accuracy on class-imbalanced datasets
- Craft rigorous statistical analysis and hypothesis testing to evaluate significance of results

Neuroscience PhD Candidate — Sep. 2017 – Sep. 2024

- Planned and executed experiments to study how neural mutations can impair cognitive processing
- Refactored legacy MATLAB codebases, increasing efficiency and speeding up data processing by 30x
- Crafted statistical analysis and visualizations, presenting findings to internal and external audiences

Evidation Health — San Mateo, CA

Data Analysis Intern — June 2022 – Aug. 2022

- Analyzed wearable sensor data using Python and SQL, quantifying data distribution stability
- Developed and communicated data-driven recommendations for mitigating data reliability issues to internal cross-functional teams

Correlation One — San Francisco, CA

Data Science Honors Fellow — Oct. 2020 – Feb. 2021

- Led team of 4 in analyzing COVID-19 spread effects on state-level business revenue, using Python
- Created data visualizations, presenting findings during Correlation One's capstone symposium

EDUCATION

University of California, San Francisco — **Graduation: Sep. 2024**

PhD in Neuroscience (GPA: 3.96) — San Francisco, CA

- Relevant courses: Deep Learning in Python, Neural Data Analysis, Experimental Design

Amherst College — **Graduation: May 2017**

BA in Neuroscience, *cum laude* honors (GPA: 3.59) — Amherst, MA

- Relevant courses: Calculus, Intermediate Statistics, Biochemistry, Computer Science
- Studied abroad at the Central University of Tibetan Studies in Sarnath, India (Winter Term, 2016)

SKILLS

Languages: Python, SQL, MATLAB
Methods: Time-series analysis, regression, clustering, classification, statistical hypothesis testing
Frameworks: PyTorch, scikit-learn, pandas, git, Neuroscience, DJing

PUBLICATIONS

"Circuit inhibition updates behavioral strategies by diverging neural representations" (In Preparation)