

STEVEN JERJIAN, Ph.D.

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PROFESSIONAL SUMMARY

- Neuroscience Ph.D., bringing over 8 years' experience in experimental design, data analysis, and hypothesis testing; key contributor to \$10m startup seed raise, and delivered first-author publications in high quality journals.
- Combine strong problem-solving, research and technical skills, with core concept understanding and capacity to communicate key points to varied audiences across academia, industry, and voluntary leadership roles
- Looking for opportunity to apply and further develop large-scale data processing, analysis and machine learning skills, to inform decisions and deliver value to wider set of stakeholders and end-users

EXPERIENCE

Neural Data Scientist

Jan 2024 – present

Biological Black Box, Baltimore, MD

- **Develop end-to-end pipelines** for encoding information into cultured biological networks and applying **CNN, RNN/LSTM and LLM** decoding architectures to process outputs, **contributing to \$10m seed funding**
- Trained **custom PyTorch models on AWS EC2** instances for proof-of-concept product development, and refactored preceding biological **data processing pipeline to reduce run times by 75%**
- **Built ETL pipeline with Python and Excel** to provide automated tracking of critical inventory and help optimize resource allocation. Presented example use cases and incorporated team feedback to offer additional features
- Initiated trunk-based Github workflow to eliminate code merge issues on complex analysis pipelines, and adopted issue tracking and semantic versioning to improve development process of custom C# experiment tool

Postdoctoral Research Scientist

Jan 2020 – Dec 2023

Johns Hopkins University, Baltimore, MD

- Collected thousands of trials of human subject data and applied **inferential logistic and linear regression analyses** to deliver new laboratory's first major [publication](#).
- Interfaced custom hardware device and input/output setup with MATLAB and Python to build modular physiological data collection and analysis pipeline, to **efficiently handle over 100GB** of data per experiment
- Developed training plans and coordinated with principal investigator and laboratory staff to train graduate and undergraduate students to design and run experiments and data analyses

- Organized and delivered science communication workshops with expert speakers for over 150 students within university science policy group, and managed peer feedback groups for entries to national memo competition
- Conceptualized and produced popular university science podcast episodes with small teams, on topics of transit equity and environmental health, and sports injuries in college-level athletes

Graduate Researcher

Sep 2015 – Dec 2019

UCL Queen Square Institute of Neurology, London, UK

- Designed and ran experiments to collect **multivariate time-series data** from over 400 neurons in primate brain regions. Re-structured raw data into array formats suitable for statistical testing and machine learning analyses
- Applied **principal component analysis** and **cross-validated correlation coefficient decoders** to activity in two brain areas to explain aspect of motor behavior, leading to [first-author publication](#)
- Presented key findings from four projects at local, national, and international conferences
- Led team of 20 people and procured £6,000 sponsorship to deliver conference for 350 students in 2016

Research Consultant

Jan 2019 – Dec 2019

PhD Pigeon, London, UK

- Delivered reports on health data landscape in target countries for pharmaceutical client, maintaining regular communication with manager on progress
- Received high recognition for rigor and quality of work, leading to extension of contract for additional projects

EDUCATION

Ph.D Neuroscience, *UCL Queen Square Institute of Neurology, London, UK*

2015 – 2019

MSci. Natural Sciences, *University College London, London, UK*

2011 – 2015

SKILLS

- Python (numpy , pandas , matplotlib , seaborn , scipy , scikit-learn , PyTorch, transformers) • MATLAB
- Git/Github • SQL • C# • AWS (EC2, S3, Lambda) • MLflow • Bash • Microsoft Excel • LaTeX

PUBLICATIONS

- **Jerjian, S. J.**, Harsch, D. R. & Fetsch, C. R. (2023) Self-motion perception and sequential decision-making: where are we heading? Phil. Trans. R. Soc. B378:20220333
- **Jerjian, S. J.**, Sahani, M. and Kraskov, A. (2020) Movement initiation and grasp representation in premotor and primary motor cortex mirror neurons eLife 9:e54139