

Dear Beacon Data Science Group hiring team,

I possess multidisciplinary problem-solving expertise as a data scientist and computational neuroscientist, gained through 11 years of experience in academic and industry projects. Across my roles in software, physics, and computational neuroscience, my overarching passion is for dissecting complex questions into manageable problems and applying the tools, techniques, and models best suited to the task. After my PhD work on the computations underlying visual processing, I joined Wispr, where I used statistics, modeling, and other tools to work on cutting-edge models for a wearable silent speech device. To that end, I am writing to enthusiastically apply for the Data Scientist position for Beacon's Life Sciences work.

During my undergraduate at the University of Miami, I gained extensive experience with programming in the capacity of both student and instructor; this greatly complimented the solid theoretical foundation gained from my Physics & Math education. As a teaching assistant for 3 years for courses that covered data structures and algorithms, I reviewed assignments to help students write clear, computationally efficient, and flexible code. I also interned as a software engineer with the Xbox One Kinect team at Microsoft, where I learned how to build data pipelines, work collaboratively on large projects, and adhere to team coding standards. My fascination with real-world problems and research was furthered by a research internship at Rockefeller University, where I applied machine learning tools (i.e. classifiers) to characterize the time-course and area-specificity of visual attention in electrophysiological signals.

As a PhD candidate in Neural Science at New York University, I worked towards understanding the hierarchical processing behind spatial vision. Building on existing work done by my advisors, Drs. Tony Movshon and Eero Simoncelli, I designed and conducted electrophysiology experiments that target both linear and non-linear computations in single neurons of the lateral geniculate nucleus and in primary visual cortex. I used statistical tests to compare effect sizes across distributions and concretely address hypotheses. In this work, I developed extensive experience in building data structures and analysis pipelines in Python to extract and analyze signals from time-series data (e.g. using Fourier analysis and building biologically plausible models.) I also fit logistic regression models to determine visual thresholds in a separate, human saccadic eye movement study with Dr. Roozbeh Kiani.

Most recently at Wispr, I contributed to focused research for a consumer wearable for human-computer interactions. I translated project goals into concrete work and analysis plans, and communicated my findings with the team and company, more broadly, to shape future work. I built data processing, filtering, and analysis pipelines; explored new features for our multi-modal neural network models; and added to/helped improve and streamline a growing code base worked on by many employees. Additionally, our journal club has allowed me to better understand the latest architectures, techniques, and advances in machine learning, as well as relate them to my own work.

In my career, I've demonstrated success in a range of research domains by identifying the correct analyses, data visualizations, and problem-solving skills that are well-suited to this Data Scientist role. I believe that my experiences and proven research expertise position me to quickly acclimate to Beacon's team, where I can contribute to ongoing projects, provide insights and interpretations for new approaches, and effectively communicate results to internal and external audiences. I've included my resume, and hope to hear back.

Sincerely,

Paul Levy