# Maedbh **King**

· Ph.D. Candidate ·

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### Application for NIAID

To whom it may concern,

## About Me

I'm currently finishing my Ph.D. in cognitive and computational neuroscience at the University of California, Berkeley. I have 6+ years of research experience, and leadership expertise in academia and non-profit work. My research consists of hypothesis- and data-driven experimentation. In my work, I apply machine learning and statistics to large and complex databases to build models of brain function. I have a strong track record of publishing in high-impact, peer-reviewed scientific journals (>350 citations), presenting at research conferences (>10 proceedings), and making science accessible (>200 downloads of open-access datasets and code). I also enjoy teaching and mentoring diverse groups of students, from undergraduates at UC Berkeley, to incarcerated students at San Quentin State Prison. Furthermore, my research interests dovetail strongly with science and technology policy, and over the past 5 years, I have used data-driven solutions to promote issues concerning equity, transparency, and accountability within academia and non-profit organizations.

## Why NIAID?

As a neuroscientist, I have enormous admiration for the groundbreaking work conducted at NIAID. This institute advances the understanding, diagnosis, and treatment of many of the world's most intractable and widespread diseases, and it has been deeply humbling to witness how scientists and administrators alike responded so rapidly and effectively to an emerging global outbreak of COVID-19. Although I am neither a virologist nor an immunologist, I want to use my scientific training, particularly my computational expertise, to work on projects that lead the way in creative and collaborative discoveries. I also believe that I can draw from my experience as an educator and academic mentor to establish productive and collaborative relationships with colleagues from diverse professional and demographic backgrounds. Finally, the PMF program at NIAID offers a unique opportunity for professional development training, and I am very eager to hone my leadership skills and expertise through meaningful work assignments. Most importantly, I am excited at the prospect of working alongside colleagues who, as well as being innovative thinkers, are creative, thoughtful, and driven.

## Why Me?

I have gained a lot of technical expertise during my STEM Ph.D., with a particular focus on data science techniques and advanced statistics. However, as every scientist knows, non-technical skills are integral to successful research, from developing efficient communication strategies for managing cross-functional projects, to establishing norms and guidelines for collaborative decision-making. I believe that I have the skills necessary to work in many different capacities at NIAID, and while I have expertise in conducting basic science research, I am now keen to work on projects that translate scientific knowledge into clinical and public health outcomes. Some of my previous work has involved grant writing, editorial duties, conference organization, high-level project planning, patient testing, setting up computational clusters, leading a team of 5 during COVID-19 pandemic to collect 300+ hours of neuroimaging data, and using data-driven solutions to advise university leadership on program evaluations. Importantly, it is because of NIH funding that I had the opportunity to conduct scientific research, and for this reason, I am motivated to apply what I have learned, namely quantitative and communication skills, to high-impact projects that push the boundaries of knowledge to ultimately treat and prevent infectious and immunologic diseases.

Sincerely,

**Maedbh King**