

Dear Sir or Madam,

I am an explainable AI, systems biology and health data science researcher currently working at the University of Cambridge. During my PhD I worked at Los Alamos National Labs, USA. In my post-doctoral positions, I worked at Harvard University and the Max Planck Institute of Molecular Physiology, Germany.

Here is a summary of my research:

My research interests are in explainable AI, systems biology and machine learning. I build computer models to simulate biological systems. The techniques that I use range from machine learning techniques to multi-scale mathematical models and bioinformatics. I am interested in building clinical informatics platforms multi-scale models, bioinformatics tools and machine learning models of biological systems.

My long-term goals are to build a research group that investigates different facets of explainable AI and biological systems, and use models to improve human health. I especially like working in an inter-disciplinary environment, interacting with people from diverse disciplines and engaging them in the process of model building. I like to work closely with clinicians and experimentalists.

My future research program will be centered around building explainable AI models that integrate data from multiple scales and levels of complexity. Some of my research themes will be:

1. Integrating next-generation sequencing data in multi-scale computational biology models
2. Developing explainable AI algorithms and bioinformatics tools for healthcare based on electronic healthcare records data
3. Developing clinical informatics platforms
4. Modelling of biological systems

I am very keen to work across disciplines and work with experimentalists and clinicians. I thank you for considering my application.

Yours sincerely,
Soumya Banerjee