11th June 2018

The Hiring Manager

ThougtWorks

Pune, India

Dear Hiring Manager,

I am writing to apply for the post of Data Scientist at ThoughtWorks, Pune, India . I had recently learned about this opportunity in Linkedin . I was a Research Assistant (Marie Curie and Formacion Profesorado Universitario Fellow) at Spanish National Research Council (CNB-CSIC, CIB-CSIC), Madrid, Spain/Madrid from 2009 to 2014. I used the research performed in these institutes to complete my PhD in Biophysics at Universidad Autonoma de Madrid (UAM) during 2014 under the supervision of Prof. Victor Munoz, Dr. Mourad Sadqi & Dr. Michele Cerminara.

I completed my B.Tech in Industrial Biotechnology from Anna University, Guindy, Chennai during 2008. During this study period, I had the opportunity to work as an undergraduate research student with computational biology and single molecule biophysics research groups of that of Prof. Pennathur Gautam and Dr. B.M.Jaffar Ali respectively. Working with these research groups was just wonderful and, triggered my interest in biophysics related research works. As a logical extension of this interest, I applied to the chemical physics/biophysics doctorate program at University of Maryland – College Park, USA. I was a Teaching Assistant at the Department of Chemistry and Biochemistry at the same university. I chose to work with one of the largest Protein folding research groups of that of Prof. Victor Munoz, who was then a Professor at the University of Maryland – College Park, USA. As he shifted the institute to Spanish National Research Council (CSIC), I moved along with him to continue my research to get my doctorate title at UAM, Spain.

I finished my PhD thesis entitled “**Buttressing a New Paradigm in Protein Folding: Experimental Tools to Distinguish between Downhill and Multi-State Folding Mechanisms:** Engrailed Homeodomain from Drosophila Melanogaster – An interesting case study **”**. My thesis project involved the thermodynamic, kinetic and single molecule studies of fast folding proteins. Various biophysics/spectroscopic techniques used include equilibrium techniques like DSC, CD, FT-IR & steady-state fluorescence, kinetic techniques like nanosecond resolution Laser Induced Temperature-Jump measurements (Pump Probe Spectroscopy) by Infrared and Fluorescence on custom built apparatus, and single molecule technique like FRET on PicoQuant Apparatus fitted with confocal microscope.

The research work required

1. Developing algorithms/steps to analyze for the experimental research problem undertaken,
2. Analyzing the results based on the experimental results obtained using appropriate statistical mechanical models,
3. Extending the existing statistical modeling approaches, if needed, for the convenience of analysis of large scale kinetic/single molecule experimental ultrafast folding data &
4. Extracting barrier heights to folding using the above approach for the experimental data obtained from all types of measurements

**During the same time period, I not only developed broad technical expertise in Molecular Biophysics from the point of view of both experiments and analysis, but also skills in project/laboratory management, communication & voluntarily assisting fellow researchers in the laboratory to conduct their research. I had also assisted my PI and Co-PIs with writing their project grants.**

**The analytical, quantitative, technical, teaching, project management, communication & interdisciplinary research skills that I have honed throughout my research/professional experiences will provide a strong foundation for the career of research at a research oriented organization. These experiences will be appropriate to carry out the respective projects at ThoughtWorks.**

**I have attached my CV along with this application.**

I look forward to hearing back from you about the opportunity.

Thank you for your time and consideration.

Sincerely,

Nagalakshmi Tiruvarur Sooriyanarayanan