Dear Madam/Sir

I would like to take this opportunity to express my interest for the Summer School on Effective HPC for Climate and Weather, to be held in University of Reading, U.K.

Review of my credentials will indicate that I have done M.Tech in **Environmental Engineering** from Malaviya National Institute of Technology, India and currently pursuing **PhD degree** from Jamia Millia Islamia, India. With a total experience of 4.5 years in Research and Education, I have worked as Senior Research Fellow in **India Meteorological Department (IMD)**, New Delhi on the project namely, "Augmentation of Environmental Monitoring and Research".

As a part of my research, I have to deal with voluminous amount of data on meteorology and climate aspects. This includes data retrieved from both satellite sensors and in-situ instruments. I am currently working on a project based on air quality forecast model in Delhi. Since I am new to working on HPC, this summer school can help me in overcoming the challenges of using big data over HPC. It would be a proliferating opportunity for PhD students like me to gain knowledge in post-processing and visualization methods for handling climate data. Hence, I would like to propose a project on 'Investigation of various **big-data** and **machine learning** approaches for **air quality modeling** and **forecasting**'.

This project would enable us to address the issues of air quality evaluation considering the spatial and temporal heterogeneities of the data. With advance of IoT (Internet of Things) infrastructures, these big-data and machine learning techniques would be desirable for developing smart cities. Given the high pollution levels in Delhi, this information could be essential in improving air quality and help meet clean air standards.

Attending this summer school will not only benefit me in my field of research but also get a chance to acknowledge work by my fellow researchers. I hope you will find my knowledge and intent suitable for the summer school. My detailed **CV** is enclosed for your reference and consideration. I will appreciate your feedback on my application.

Thanking You.

With Best Regards,

KANIKA TANEJA
PhD student
Jamia Millia Islmia
New Delhi, India