Job Title: Research Fellow

Reports to: Director Prof. Sandeep Juneja, SCDLDS

Location: Ashoka University, Sonepat, Haryana

About Ashoka University:

Ashoka University -India's premier interdisciplinary teaching and research university. An institution that has become a beacon of academic excellence in less than 10 years since its inception. At Ashoka, we encourage you to embrace the new, push the boundaries for continuous learning, and adapt to a world of constant change Because we believe that each Ashokan is capable of becoming a thought leader.

As part of our thriving and committed workforce, you will:

Be Mission-Driven: Champion interdisciplinary learning, innovative pedagogy, and academic rigor to transform Indian higher education.

Think Strategically: Collaborate with visionary minds to shape the future of higher education through strategic planning and a forward-thinking approach.

Act Authentically: Embrace authenticity and integrity, fostering an inclusive and supportive environment where every voice is valued.

Take Accountability: Own your work and drive positive change, as an empowering individual seeking to make a meaningful contribution.

Build Collaboration: Experience the power of teamwork and diverse perspectives, working collectively towards our shared goals.

Deliver Excellence: Strive for excellence in all aspects, upholding the highest standards of academic excellence, student support, and professional development opportunities.

At Ashoka University, we are on a mission to redefine higher education and create a remarkable space where innovation and collaboration thrive. As a **pioneering force in interdisciplinary learning**, we **continually grow and adapt** to stay at the forefront of educational excellence with emphasis on inclusivity and equal opportunity. Our philosophy revolves around **care, well-being, and connection**, which are deeply embedded in everything we do.

When you join our community, you become part of an extraordinary journey in which you can unleash your potential and make a meaningful impact. Where education empowers, where innovation thrives, and where excellence and humility coexist. We truly believe the world will enrich itself when there is progress with purpose.

About SCDLDS:

The Safexpress Centre for Data, Learning, and Decision Sciences (SCDLDS), at Ashoka University, serves as a multidisciplinary hub for research and education in data science, machine learning, artificial intelligence, and decision sciences.
Website link: https://www.ashoka.edu.in/page/centre-for-data-learning-and-decision-sciences-cdlds/

Role and Responsibilities:

- Contribute in developing, fine-tuning, and validating advanced machine learning models for precipitation and temperature forecasting in India.
- Implement cutting-edge generative AI probabilistic forecasting techniques to weather and climate modelling.
- Source, process, and manage large-scale meteorological datasets, including Indian monsoon rainfall data, satellite observations, and outputs from Numerical Weather Prediction (NWP) models.
- Conduct rigorous statistical analysis to compare the performance and skill of various forecast models.
- Write and maintain clean, well-documented code in Python for data analysis, model implementation, and visualization.
- Contribute to the preparation of research manuscripts for publication in peer-reviewed journals and presentations for scientific conferences.
- Actively participate in group meetings, seminars, and workshops at the SCDLDS.

Essential Qualifications:

- A PhD, Master's degree (M.Sc./M.Tech.) or a 4-year Bachelor's degree (B.Tech/B.E.) from a premier institute in statistics, mathematics, machine learning, computer science, engineering or a related quantitative field. Exceptional academic performance. Background in atmospheric science, meteorology or climate science will be an advantage.
- A solid foundation in statistics and data analysis.
- Strong programming skills in Python and proficiency with scientific computing libraries (e.g., NumPy, Pandas, xarray, Matplotlib).
- Familiarity with modern AI/ML techniques.
- Familiarity with working in a Linux/Unix command-line environment.
- Excellent analytical skills and a strong motivation for research.
- Strong communication and presentation skills

Desirable Qualifications:

- Hands-on experience with machine learning frameworks (e.g., Scikit-learn, TensorFlow, PyTorch).
- Prior research experience working with weather or climate data.
- Familiarity with Numerical Weather Prediction (NWP) model output (e.g., from NCEP, ECMWF).
- Knowledge of the Indian monsoon and its dynamics would be a significant advantage.
- Experience with GPUs and high-performance computing (HPC) environments.

Application Submission Process:

We invite you to embark on this journey by submitting your application to Ashoka University's <Department Name>. To ensure your candidacy receives the attention it deserves, kindly follow the application submission process outlined below:

Cover Letter: Provide a concise letter (maximum one page) detailing your interest in the project and how your skills align with the job requirements.

Curriculum Vitae (CV): Submit a comprehensive CV highlighting your academic background, research experience, technical expertise, and a list of publications (if applicable).

Letters of Recommendation: Two recommendation letters must be sent directly by your referees with the subject line: *"Recommendation for [Applicant's Full Name]"*.

Submission: Send your application to **ashoka-cdlds@ashoka.edu.in**. Use the following subject line format for your email:
 "Designation – Department Name _Applicant Name".

Include Essential Details: Along with your CV, kindly provide the following information:

- Last compensation received: We value your expertise and acknowledge the importance of fair compensation.
- Expected salary: Share your aspirations for growth and remuneration.
- Notice period: Inform us of the time required to transition from your current role, if applicable.

Pursuit for Excellence: At Ashoka University, we strive for excellence in all aspects of our operations. Therefore, only shortlisted candidates will be contacted as part of our rigorous selection process.

Adherence to Deadlines: To ensure fairness and efficiency, please submit your application by (July 31, 2025). Applications received after the deadline will not be considered.

We look forward to receiving your application as we embark together on a remarkable journey of professional growth and development. Join our exceptional community at Ashoka University, where excellence is nurtured, and aspirations are transformed into reality.