St. Francis
College for Women
Begumpet, Hyderabad-500016
(Autonomous & Affiliated to Osmania University)
NAAC Re-accredited with 'A' Grade 4th Cycle

जैवप्रौद्योगिकी विभाग
DEPARTMENT OF
BIOTECHNOLOGY
सत्यमेव जयते

ST. FRANCIS COLLEGE FOR WOMEN, HYDERABAD

ACADEMIC YEAR 2023 - 2024

DEPARTMENT OF PHYSICS

REPORT ON ONLINE WORKSHOP ON 'ARTIFICIAL INTELLIGENCE IN PHYSICS'

Date: February 15-20, 2024

Time: 6:00 PM -7:30 PM (All 6 days)

Brochure:

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Dr. Usha Praveena attended an 6 Day **National online workshop on 'ARTIFICIAL INTELLIGENCE IN PHYSICS'** under DBT STAR COLLEGE (Strengthening Component). It was conducted by The Indian Association of Physics Teachers- IAPT- Bengaluru Chapter. The goal of the extensive online workshop on "Artificial Intelligence in Physics" was to investigate the relationship between physics and artificial intelligence (AI). The workshop, which was held virtually, brought together specialists, investigators, and enthusiasts from the two domains to discuss the potential uses, difficulties, and long-term implications of incorporating AI methods into physics study and practice.

Objectives:

1. To talk about the newest developments in physics-related AI technology.

2. To investigate different uses of AI for resolving challenging physics issues.

3. To encourage cooperation and information sharing between the physics and AI communities.

4. To determine prospects for physics research and AI integration.

Outcomes:

The "Artificial Intelligence in Physics" online workshop showcased the revolutionary potential of AI in improving physics research and tackling difficult scientific problems. It also served as a useful forum for interdisciplinary discussion and knowledge exchange. Participants discussed the ethical ramifications of AI integration in physics, discovered potential for collaboration, and obtained insights into cutting-edge techniques. After the session, there was a feeling of hope and excitement for the future investigation and use of AI methods in Physics.

Topics covered

An introduction to artificial intelligence (AI) in physics: Topics covered included machine learning methods, neural networks, and deep learning architectures.

AI for Computational Physics: Participants investigated how AI techniques may improve physics computational models and simulations, increasing precision and effectiveness in fields like cosmology, quantum mechanics, and fluid dynamics.

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Data-driven Physics Discoveries: This session addressed how artificial intelligence (AI) algorithms may examine large datasets produced by observations and experiments to derive significant insights, facilitating discoveries in fields such as condensed matter physics, astronomy, and particle physics.

AI in Experimental Design and Instrumentation: The use of AI to improve experimental configurations, data collection, and instrument calibration in order to further experimental physics research was the subject of discussions.

Certificate

Indian Association of Physics Teachers

CERTIFICATE   RC12A

This is to certify that **Dr.USHA PRAVEENA V J** of
St.Francis College for Women

has participated in the National level Online Workshop on
ARTIFICIAL   INTELLIGENCE   AWARENESS IN PHYSICS held
from February 15ᵗʰ to 20ᵗʰ, 2024 organized by RC 12A.

Prof.P K Ahluwalia
PRESIDENT, IAPT

Dr.Arvind Kulkarni
CONVENER