Preface for the First International Workshop on Artificial Intelligence: Empowering Sustainable Development

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AISD 2023 is the First International Workshop on Artificial Intelligence: Empowering Sustainable Development, September 4-5, 2023, co-located with First International Conference on Artificial Intelligence: Towards Sustainable Intelligence (AI4S-2023), Pune, India. The objective of the workshop is to involve all top researchers, promising academic scientists, and research scholars to exchange their knowledges and share research results regarding all state-of-the-art developments in various fields that empower sustainability. It also provides an opportunity for educators, practitioners, and researchers to discuss and present the latest trends, and hands-on challenges faced, along with possible solutions proposed for sustainable development. The primary interest of this workshop is to assemble a set of research papers based on novel techniques showing original, current state-of-art and recent research on the given theme, and how they can be of help in providing solutions to problems faced by society.

We extend our heartfelt gratitude to all the authors who have made significant contributions to this workshop, the reviewers who provided valuable feedback involving an average of three reviews per article that led to an excellent scientific program., and the participants who enriched the discussions with their insights and experiences.

We would also like to thank our Partners, the Organizing Team, and the Program Committee members for their generous support which has made this event possible.

AISD 2023 workshop has received 20 papers and accepted 7 papers after a rigorous reviewing process. Out of 7 papers, 5 are accepted as long papers while 2 are considered in short paper category.

The papers presented in AISD have undergone a rigorous peer-review process, ensuring the highest quality of academic rigor and relevance. Each contribution represents not just a research endeavor but a vision for a sustainable future.

CEUR Workshop Proceedings (CEUR-WS.org)

The following paper titles were accepted for publication and were also presented at the workshop:

Regular Papers:

- Depression Diagnosis through Audio Analysis Using Machine Learning Models Ensuring Sustainable Development of Mankind
- Comparative Analysis of ARIMA, Deep Learning, and Lasso Regression Models for Time Series Forecasting: Assessing Accuracy, Robustness, and Computational Efficiency
- A Study of Fuzzy Methodology of Tunnel Boring Machine in the Project of Lucknow Metro Rail Corporation
- FPGA-based Hardware Classifier for Diabetic Sensorimotor Polyneuropathy Severity Assessment
- Applying Machine Learning for Ensuring Sustainable Management of Water (SDG6)

Short Papers:

- Towards a Healthier Future: The Transformative Role of AI in Promoting Good Health & Well-being (SDG-3)
- A Critical Review on Sustainable Structural Optimization using Computational Approach

Best Paper Award

The Best paper award was decided by the panel having session chairs and by the organizers collectively and was finally awarded to:

Prathika Yadav, Dr. Pooja Jain and Tapan Jain from the **Indian Institute of Information Technology, Nagpur** for their paper title*, "Depression Diagnosis through Audio Analysis Using Machine Learning Models Ensuring Sustainable Development of Mankind".*

As you explore the contents of the workshop proceedings volume, we invite you to delve into the world of AI-powered sustainable development and to engage with the innovative ideas and groundbreaking research presented herein.

It is our sincere hope that these proceedings will serve as a source of knowledge and inspiration. Thank you for joining us on this intellectual journey.

Workshop Chairs

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Program Committee

Fernando Ortiz Rodriguez (Universidad Autonoma de Tamaulipas, Mexico)

Sanju Tiwari (Universidad Autonoma de Tamaulipas, Mexico)

Vijaya Padmanabha (Modern College of Business and Science, Sultanate of Oman)

D. S. Yadav (Institute of Engineering and Technology, India)

Patience Usoro Usip (University of Uyo, Nigeria)

Marcin Paprzycki (Polish Academy of Sciences, Poland)

Sardar M.N. Islam (Victoria University, Australia)