International Conference on Data-Processing and Networking (ICDPN-2025)

Date: 7th – 8th November, 2025

ORGANISED BY : Institute of Technology and Business in České Budějovice, Near Prague, Czech Republic, Europe (Venue).

********** CALL FOR PAPERS **********

SPECIAL SESSION ON

" Harnessing Machine Learning and Deep Learning for Advancements in Healthcare, Agriculture, and Beyond"

SESSION ORGANIZERS:

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EDITORIAL BOARD: (Optional)

[Name, University or Organization, Country, e-mail]

SESSION DESCRIPTION:

This session explores the transformative applications of Machine Learning (ML) and Deep Learning (DL) across critical sectors such as healthcare, agriculture, and environmental sustainability. In healthcare, ML and DL are revolutionizing diagnostics and treatment planning. For instance, AI models have been developed to analyze medical imaging, aiding in early disease detection and personalized treatment strategies. In agriculture, these technologies are enhancing precision farming practices. ML algorithms process data from IoT sensors and drones to monitor crop health, predict yields, and optimize resource usage. Additionally, DL models are employed for real-time pest detection, enabling timely interventions and reducing crop losses. Beyond these domains, ML and

DL contribute to environmental sustainability by enabling predictive analytics for climate change mitigation, optimizing renewable energy systems, and monitoring biodiversity. This session aims to highlight cutting-edge research and real-world implementations of ML and DL, fostering discussions on their potential to address global challenges and drive innovation across various sectors.

RECOMMENDED TOPICS:

Topics to be discussed in this special session include (but are not limited to) the following:

i. **AI-Powered Genomic Analysis for Personalized Medicine**
ii. **Deep Learning Models for Early Disease Detection**
iii. **Predictive Analytics in Patient Care**
iv. **AI in Mental Health Assessment**
v. **Precision Farming Using Machine Learning**
vi. **Disease and Pest Detection in Crops**
vii. **Soil Health Monitoring with AI**
viii. **Climate-Resilient Crop Modeling**
ix. **AI for Climate Change Modeling**
x. **Wildlife Conservation through Deep Learning**
xi. **Smart Waste Management Systems**
xii. **Renewable Energy Forecasting**

SUBMISSION PROCEDURE:

Researchers and practitioners are invited to submit papers for this special theme session on **" Harnessing Machine Learning and Deep Learning for Advancements in Healthcare, Agriculture, and Beyond".**

All submissions must be **original** and may not be under review by another publication. **INTERESTED AUTHORS SHOULD CONSULT THE CONFERENCE'S GUIDELINES FOR MANUSCRIPT SUBMISSIONS**

at:https://www.icdpn-conf.com/Downloads.

All submitted papers will undergo a **double-blind peer review** process.

NOTE: While submitting the paper in this special session, please specify **[Harnessing Machine Learning and Deep Learning for Advancements in Healthcare, Agriculture, and Beyond]** at the top (above the paper title) of the first page of your paper.

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