Report Workshop on Artificial Intelligence

Organized by

Department of Computer Science

Title: Workshop on Artificial Intelligence

Date: [22&23-09-2022]
Duration: [Two Days']

Introduction:
The workshop on Artificial Intelligence (AI) was conducted over the course of two days with the aim of providing participants with a comprehensive understanding of AI and its applications. The workshop covered various topics, including machine learning, deep learning, natural language processing, and computer vision. It aimed to equip participants with the knowledge and skills necessary to leverage AI in their respective fields.

Day 1:

Session 1: Introduction to Artificial Intelligence
The workshop began with an overview of AI, its history, and its impact on various industries.
Key concepts such as supervised learning, unsupervised learning, and reinforcement learning were introduced.
Real-world examples were provided to illustrate the practical applications of AI.

Session 2: Machine Learning Fundamentals
Participants learned about the basics of machine learning, including data preprocessing, feature engineering, and model selection.
Various machine learning algorithms such as linear regression, decision trees, and support vector machines were discussed.
Hands-on exercises were conducted to familiarize participants with implementing machine learning algorithms using popular frameworks.

Session 3: Deep Learning and Neural Networks
The session delved into deep learning and neural networks, including the architecture of artificial neural networks (ANNs).
Concepts such as activation functions, backpropagation, and gradient descent were covered.
Participants had the opportunity to build and train their own neural networks using deep learning libraries.

Head & Convener
Internal Quality Assurance Cell (IQAC)
St. Wilfred's College for Girls
Jaipur

Principal
St. Wilfred's College For Girls
Jaipur

Day 2:

Session 4: Natural Language Processing (NLP)
The workshop shifted focus to NLP, exploring techniques for text preprocessing, sentiment analysis, and named entity recognition.
Participants were introduced to popular NLP libraries like NLTK and spaCy.
Practical exercises allowed participants to work with NLP models and understand their applications.

Session 5: Computer Vision
The session introduced computer vision and its applications in image recognition, object detection, and image segmentation.
Topics covered included convolutional neural networks (CNNs), transfer learning, and image preprocessing techniques.
Hands-on exercises enabled participants to implement computer vision models and understand their capabilities.

Session 6: Ethical Considerations and Future Trends in AI
The workshop concluded with a discussion on the ethical considerations surrounding AI, such as bias, privacy, and transparency.
Emerging trends in AI, including explainable AI, federated learning, and generative models, were explored.
Participants engaged in a Q&A session, addressing their queries and concerns related to AI ethics and future developments.

Conclusion:
The workshop on Artificial Intelligence provided participants with a comprehensive overview of AI concepts, algorithms, and applications. Through a combination of theoretical sessions and hands-on exercises, participants gained practical experience in implementing AI techniques. The workshop also emphasized the importance of ethical considerations in AI development and highlighted future trends in the field. Overall, the workshop was successful in equipping participants with the knowledge and tools to leverage AI effectively in their respective domains.