IEEE Club: Workshop on Deep Learning

The IEEE club conducted their first event of the year, a Hands-On workshop on Deep Learning on the 27th September, 2023, conducted by Prof. Sakshi Indolia. The workshop aimed to provide participants with a foundational understanding of deep learning, catering to beginners with little to no prior experience in the field. With the help of an experienced instructor, the workshop covered essential concepts, practical examples, and also included hands-on demonstration of a real world usage of deep learning.

Deep learning is a subfield of machine learning that has gained tremendous popularity in recent years due to its ability to solve complex tasks, such as image and speech recognition, natural language processing, and more applications, in almost all domains possible.

The event started with the club members briefly introducing Prof. Sakshi Indolia, who is actively involved with research in the field of artificial intelligence and neural networks. Ma'am started the workshop by explaining what deep learning is and its applications. She further elaborated on the core concept of neural networks and how they mimic the neural networks in human brains and explained the phases of deep learning in detail. Then, she familiarized the participants with popular deep learning frameworks, such as TensorFlow and PyTorch and alo introduced convolutional neural networks and their applications in image recognition.

The participants learned how to design and build deep learning models using TensorFlow. Key topics included- defining the model architecture, compiling the model and setting up the training process (loss function, optimizer, metrics, et al). They then applied all that they learnt and tested the accuracy of their model in a Python environment on Google Colab. The workshop concluded with a Q&A session where participants had the opportunity to ask questions and clarify any doubts.

The participants gained practical experience in building, training, and evaluating deep learning models, and left the workshop with the skills necessary to continue their deep learning journey. It would not be amiss to say that the IEEE club's session was a success through and through.