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A gentle introduction to deep learning

Tuesday 12 March 2024 13:30 (1h 50m)

In this session, participants will gain insights into the realm of deep learning. The session is structured to offer a comprehensive overview of fundamental concepts of deep learning and artificial neural networks (ANNs), including an exploration of backpropagation, which is the key algorithm underpinning learning in ANNs. Attendees will acquire an understanding of various ANN architectures, such as multi-layer perceptrons, convolutional, and recurrent networks. The session will also distinguish between supervised and self-supervised learning, providing insights into their roles in harnessing labeled and unlabeled data for model training.

To complement the theoretical knowledge, the session includes hands-on exercises where participants will apply their newfound knowledge to construct and train basic neural networks. Using Python and PyTorch, these exercises are designed to offer practical experience in implementing deep learning models.

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