

Special Issue

Neural Networks for Feature Extraction

Message from the Guest Editors

Neural networks have been widely used in feature extraction tasks, and current research focuses on the following aspects: improving the effectiveness of feature learning, e.g., through regularization and pre-training; and designing new neural network structures to learn more abstract and efficient features, e.g., convolutional neural networks, recurrent neural networks, and spike neural networks.

Combining neural networks with other methods can be carried out to form a more powerful feature learning framework.

In summary, neural networks have the advantages of automatically learning features, learning abstract features, good feature generalization, and convergence to stable features, which often make the features learned by neural networks more powerful than artificial features and widely applicable to downstream tasks. Neural networks provide a powerful tool for feature learning and representation.

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