Summary of the paper ANN: A tutorial

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"Artificial Neural Networks: A Tutorial" provides an overview on ANNs, a widely utilized machine learning approach. The tutorial covers two main types of learning algorithms in ANNs, supervised and unsupervised. In supervised learning, the network is trained with labeled data to produce a desired output given an input. In unsupervised learning, the network uses unlabeled data to discover patterns or structure in the data.

Supervised learning algorithm includes learning rules like error-correction and Hebbian learning. Error-correction algorithms adjust the weights of the network based on the difference between the desired and actual output, while Hebbian learning updates the weights based on the correlation between local inputs and outputs. Also, the reinforcement learning, a subset of supervised learning, is where the criqitue is provided for the network output rather than the correct labeled output itself to adjust the weights. Unsupervised learning algorithms, such as competitive learning and self-organizing maps are also covered in the paper. Competitive learning algorithms use competition between neurons to determine the best representation of the data, while self-organizing maps use a topological organization of neurons to represent the data.

The tutorial also covers activation functions, which are used to introduce non-linearity in the network. Activation functions Artificial Neural Networks: A Tutorial" provides an overview on ANNs, a widely utilized machine learning approach. The tutorial covers two main types of learning algorithms in ANNs, supervised and unsupervised. In supervised learning, the network is trained with labeled data to produce a desired output given an input. In unsupervised learning, the network uses unlabeled data to discover patterns or structure in the data.

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The tutorial also covers activation functions, which are used to introduce non-linearity in the network. Activation functions determine the output of a neuron given its inputs and weights. Common activation functions include sigmoid, hy-

perbolic tangent, and rectified linear unit (ReLU). Moreover, the paper mentions about the architecture of ANNs which consists of the number of layers, number of neurons in each layer, and the connections between neurons. The design of the network architecture is crucial to the performance of the network and affects the ability of the network to learn from the data.

In essence, the tutorial provides a thorough understanding of the ideas and methods involved in artificial neural networks and highlights the significance of grasping these ideas for the creation and execution of ANNs. It also emphasizes the requirement for ongoing research and growth in the field of ANNs to enhance their capability and practicality in solving real-world issues.determine the output of a neuron given its inputs and weights. Common activation functions include sigmoid, hyperbolic tangent, and rectified linear unit (ReLU). Moreover, the paper mentions about the architecture of ANNs which consists of the number of layers, number of neurons in each layer, and the connections between neurons. The design of the network architecture is crucial to the performance of the network and affects the ability of the network to learn from the data.

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