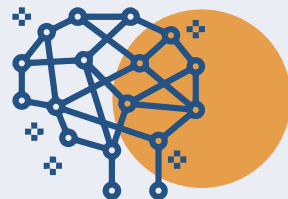


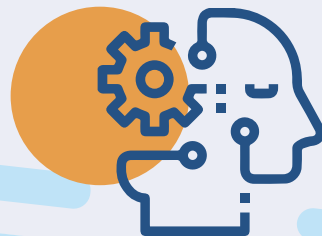
### Neural Networks:

Neural networks are computational models inspired by the human brain that consist of interconnected nodes, each performing its own computation based on input data and learned parameters.



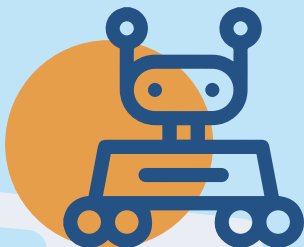
### Activation Function:

An activation function is a mathematical operation applied to the output of a node in a neural network, determining whether the node should be activated (produce an output) based on a given threshold.



### Gradient Descent:

Gradient descent is an optimization algorithm used in training neural networks. It adjusts the weights and biases of the network by iteratively moving towards the minimum of the cost function, reducing prediction errors.



### Backpropagation:

Backpropagation is a learning algorithm used in neural networks. It involves the iterative adjustment of weights and biases by calculating the gradient of the cost function with respect to the network's parameters and propagating it backward through the layers.

### Feedforward Neural Network:

A feedforward neural network is a type of neural network where information flows in one direction, from the input layer to the output layer. It does not involve feedback loops, making it suitable for tasks like image recognition and natural language processing.