Artificial Intelligence Overview

Artificial Intelligence refers to the simulation of human intelligence in machines. AI systems are designed to think, learn, and make decisions. Applications of AI include healthcare, finance, transportation, robotics, and education. AI can be categorized into narrow AI, general AI, and super AI. Artificial Intelligence refers to the simulation of human intelligence in machines. AI systems are designed to think, learn, and make decisions. Applications of AI include healthcare, finance, transportation, robotics, and education. AI can be categorized into narrow AI, general AI, and super AI. Artificial Intelligence refers to the simulation of human intelligence in machines. AI systems are designed to think, learn, and make decisions. Applications of AI include healthcare, finance, transportation, robotics, and education. AI can be categorized into narrow AI, general AI, and super AI. Artificial Intelligence refers to the simulation of human intelligence in machines. AI systems are designed to think, learn, and make decisions. Applications of AI include healthcare, finance, transportation, robotics, and education. AI can be categorized into narrow AI, general AI, and super AI. Artificial Intelligence refers to the simulation of human intelligence in machines. AI systems are designed to think, learn, and make decisions. Applications of AI include healthcare, finance, transportation, robotics, and education. AI can be categorized into narrow AI, general AI, and super AI.

Machine Learning Fundamentals

Machine Learning is a subset of AI that focuses on building systems that learn from data. Instead of rule-based programming, ML models identify patterns automatically. Common ML tasks include classification, regression, and clustering. Machine Learning is a subset of AI that focuses on building systems that learn from data. Instead of rule-based programming, ML models identify patterns automatically. Common ML tasks include classification, regression, and clustering. Machine Learning is a subset of AI that focuses on building systems that learn from data. Instead of rule-based programming, ML models identify patterns automatically. Common ML tasks include classification, regression, and clustering. Machine Learning is a subset of AI that focuses on building systems that learn from data. Instead of rule-based programming, ML models identify patterns automatically. Common ML tasks include classification, regression, and clustering. Machine Learning is a subset of AI that focuses on building systems that learn from data. Instead of rule-based programming, ML models identify patterns automatically. Common ML tasks include classification, regression, and clustering.

Supervised Learning

Supervised learning uses labeled datasets where the correct output is known. Models learn a mapping between inputs and outputs. Algorithms include Linear Regression, Logistic Regression, KNN, and Decision Trees. Supervised learning uses labeled datasets where the correct output is known. Models learn a mapping between inputs and outputs. Algorithms include Linear Regression, Logistic Regression, KNN, and Decision Trees. Supervised learning uses labeled datasets where the correct output is known. Models learn a mapping between inputs and outputs. Algorithms include Linear Regression, Logistic Regression, KNN, and Decision Trees. Supervised learning uses labeled datasets where the correct output is known. Models learn a mapping between inputs and outputs. Algorithms include Linear Regression, Logistic Regression, KNN, and Decision Trees. Supervised learning uses labeled datasets where the correct output is known. Models learn a mapping between inputs and outputs. Algorithms include Linear Regression, Logistic Regression, KNN, and Decision Trees.

Unsupervised Learning

Unsupervised learning deals with unlabeled data. The goal is to find hidden patterns or structures. Popular techniques include K-Means clustering and Principal Component Analysis. Unsupervised learning deals with unlabeled data. The goal is to find hidden patterns or structures. Popular techniques include K-Means clustering and Principal Component Analysis. Unsupervised learning deals with unlabeled data. The goal is to find hidden patterns or structures. Popular techniques include K-Means clustering and Principal Component Analysis. Unsupervised learning deals with unlabeled data. The goal is to find hidden patterns or structures. Popular techniques include K-Means clustering and Principal Component Analysis. Unsupervised learning deals with unlabeled data. The goal is to find hidden patterns or structures. Popular techniques include K-Means clustering and Principal Component Analysis.

Neural Networks

Neural Networks are inspired by the structure of the human brain. They consist of input layers, hidden layers, and output layers. Each neuron applies weights and activation functions to process data. Neural Networks are inspired by the structure of the human brain. They consist of input layers, hidden layers, and output layers. Each neuron applies weights and activation functions to process data. Neural Networks are inspired by the structure of the human brain. They consist of input layers, hidden layers, and output layers. Each neuron applies weights and activation functions to process data. Neural Networks are inspired by the structure of the human brain. They consist of input layers, hidden layers, and output layers. Each neuron applies weights and activation functions to process data. Neural Networks are inspired by the structure of the human brain. They consist of input layers, hidden layers, and output layers. Each neuron applies weights and activation functions to process data.

Deep Learning

Deep Learning is a branch of machine learning using deep neural networks. It is widely used in image recognition, speech processing, and NLP. Deep learning models require large datasets and high computational power. Deep Learning is a branch of machine learning using deep neural networks. It is widely used in image recognition, speech processing, and NLP. Deep learning models require large datasets and high computational power. Deep Learning is a branch of machine learning using deep neural networks. It is widely used in image recognition, speech processing, and NLP. Deep learning models require large datasets and high computational power. Deep Learning is a branch of machine learning using deep neural networks. It is widely used in image recognition, speech processing, and NLP. Deep learning models require large datasets and high computational power. Deep Learning is a branch of machine learning using deep neural networks. It is widely used in image recognition, speech processing, and NLP. Deep learning models require large datasets and high computational power.

Natural Language Processing

NLP enables machines to understand and generate human language. Tasks include tokenization, stemming, sentiment analysis, and text generation. Modern NLP relies on transformer-based models. NLP enables machines to understand and generate human language. Tasks include tokenization, stemming, sentiment analysis, and text generation. Modern NLP relies on transformer-based models. NLP enables machines to understand and generate human language. Tasks include tokenization, stemming, sentiment analysis, and text generation. Modern NLP relies on transformer-based models. NLP enables machines to understand and generate human language. Tasks include tokenization, stemming, sentiment analysis, and text generation. Modern NLP relies on transformer-based models. NLP enables machines to understand and generate human language. Tasks include tokenization, stemming, sentiment analysis, and text generation. Modern NLP relies on transformer-based models.