

What is IoT?

The Internet of things describes physical objects with sensors, processing ability, software, and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks.

Basics of Bigdata

❖ What is big data?

Big data is the collective name for the large amount of registered digital data and the equal growth thereof. The aim is to convert this stream of information into valuable information for the company.

✓ Volume

It is not surprising that Big Data is large in volume. It is estimated that we create 2.3 trillion gigabytes of data every day. And that will only increase.

✓ Velocity

Velocity, or speed, refers to the enormous speed with which data is generated and processed.

✓ Variety

The high speed and considerable volume are related to the variety of forms of data.

✓ Veracity

How truthful Big Data is remains a difficult point. Data quickly becomes outdated and the information shared via the internet and social media does not necessarily have to be correct. Many managers and directors in the business community do not dare to make decisions based on Big Data.

Categories of AI

❖ Types of Artificial Intelligence:

Artificial Intelligence can be divided in various types, there are mainly two types of main categorization which are based on capabilities and based on functionally of AI.

✓ **AI type-1: Based on Capabilities**

- 1) **Weak AI or Narrow AI:**
- 2) **General AI:**
- 3) **Super AI:**

✓ **Artificial Intelligence type-2: Based on functionality**

- 1) **Reactive Machines**
- 2) **Limited Memory**
- 3) **Theory of Mind**
- 4) **Self-Awareness**

Bigdata in IoT -case study

Business Problem

Handling large volumes of data from livestock, images, streaming data is challenges. biological factors based monitoring and implementation poses functional challenges. The goal of ranching and farming are

- ✓ Increase yields
- ✓ Lower costs

Solution Approach

Technology advancements are driving parallel trends in agriculture and ranching. while satellite imagery offers a big picture overview, sensors provide a micro view of individual plants and animals.

Artificial intelligence in IoT-case study

Business Problem

Handling large volumes of sensors data from multiple devices and platforms. The goals of voice based alerts and recognition system is

- ✓ Proactive voice based alerts
- ✓ Voice recognition initiating system changes

Solution Approach

Sensor data from multiple data sources is gathered at a common data lake where different monitoring dashboards are built and artificial intelligent activities are conducted.

Career path in IoT analytics

❖ Career track is divided as three

✓ **Functional**

- 1) IoT consultant
- 2) Product manager
- 3) BD/Sales manager

✓ **Techno-Functional**

- 1) Data Scientist

2) Project manager

✓ **Technical**

1) AI Engineer

2) ML Researcher