Components of Digital Supply Chain

1. Artificial Intelligence
2. Machine Learning
3. Blockchain
4. 3D Printing
5. Internet of Things
6. Data Science
7. Robotic Process Automation(RPA)

Artificial Intellegence

The intelligence demonstrated by machines is known as Artificial Intelligence. Artificial Intelligence has grown to be very popular in today's world. It is the simulation of natural intelligence in machines that are programmed to learn and mimic the actions of humans. These machines are able to learn with experience and perform human-like tasks. As technologies such as AI continue to grow, they will have a great impact on our quality of life.

Machine Learning

Machine-learning algorithms use statistics to find patterns in massive amounts of data. And data, here, encompasses a lot of things—numbers, words, images, clicks, what have you. If it can be digitally stored, it can be fed into a machine-learning algorithm.

Machine learning is the process that powers many of the services we use today—recommendation systems like those on Netflix, YouTube, and Spotify; search engines like Google and Baidu; social-media feeds like Facebook and Twitter; voice assistants like Siri and Alexa. The list goes on.

Blockchain

Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system

A blockchain is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain. Each block in the chain contains a number of transactions, and every time a new transaction occurs on the blockchain, a record of that transaction is added to every participant's ledger. The decentralised database managed by multiple participants is known as Distributed Ledger Technology (DLT).

3D Printing

3D Printing is a process for making a physical object from a three-dimensional digital model, typically by laying down many successive thin layers of a material. It brings a digital object (its CAD representation) into its physical form by adding layer by layer of materials.
There are several different techniques to 3D Print an object. We will go in further details later in the Guide. 3D Printing brings two fundamental innovations: the manipulation of objects in their digital format and the manufacturing of new shapes by addition of material.

Internet of Things(IoT)

The internet of things, or IoT, is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

An IoT ecosystem consists of web-enabled smart devices that use embedded systems, such as processors, sensors and communication hardware, to collect, send and act on data they acquire from their environments. IoT devices share the sensor data they collect by connecting to an IoT gateway or other edge device where data is either sent to the cloud to be analyzed or analyzed locally.

Data Science

Data science is the field of study that combines domain expertise, programming skills, and knowledge of mathematics and statistics to extract meaningful insights from data. Data science practitioners apply machine learning algorithms to numbers, text, images, video, audio, and more to produce artificial intelligence (AI) systems to perform tasks that ordinarily require human intelligence. In turn, these systems generate insights which analysts and business users can translate into tangible business value. More and more companies are coming to realize the importance of data science, AI, and machine learning.

Robotic Process Automation

Robotic Process Automation, RPA, is an advanced form of business process automation that is able to record tasks performed by a human on their computer, then perform those same tasks without human intervention.

RPA allows organizations to automate task just like a human being was doing them across application and systems. The purpose of RPA is to transfer the process execution from humans to bots. Robotic process automation interacts with the existing IT architecture with no complex system integration required.