**Assignment 1**

# Principle of management



**University of Management and Technology Lahore**

## Participant’s Name: Hamza Yaseen

## Participant ID: F2022031005

## **Section** : A

# Resource Person

# Pervaiz Mughal

**Department of**

**Industrial engineering**

**School of Engineering**

**Machine learning, artificial intelligence and big data are transforming the world around us. How these can influence engineering.**

**Machine learning**

Machine learning is a process that needs inputs from many devices to feed data to it so that data can be collected, evaluated, and used to develop knowledge about how a production line produces the products and parts it does

**How machine learning can influence engineers?**

AI and machine learning will replace jobs that we know about today, but because it brings new capabilities, it will open up new industries and new jobs that aren’t even on the modern engineer’s radar. Low value and meaningless jobs currently in place will get automated away. It will allow you to spend more time on better decisions. Remaining at the top of our engineering game is no easy task when the game is constantly innovating with new technologies. To remain relevant as engineers, we must understand – even predict – how machine learning and AI will change the game and adapt before we are left in the dust.

**Artificial intelligence**

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision.

**How artificial intelligence can influence engineers?**

Perhaps the most impactful aspect of AI innovation in engineering is just how it will affect our workflow management. AI will surely help us manage our designs and improve interoperability, but it will also break down barriers between departments – between tasks. Artificial intelligence will help us manage our engineering data efficiently and effectively. Adopting and adapting to innovations in artificial intelligence within engineering positions you to perform at the top of your game.

**Big Data**

Big Data is a collection of data that is huge in volume, yet growing exponentially with time. It is a data with so large size and complexity that none of traditional data management tools can store it or process it efficiently. Big data is also a data but with huge size.

**How big data can influence engineers?**

Big Data can give an industrial engineer a ton of information which can offer great insight into a number of different areas which could be of use when developing a good system. One huge benefit is that it can help to focus in on product defects and inconsistencies in manufacturing. Big data analytics and tools promptly reduce risks by optimizing complex decisions for unexpected events and potential threats. These technologies will assist engineers in enhancing their capabilities and allow them to explore design and weight-saving solutions previously unthinkable. Another way AI may help engineers is by automating low-value jobs, allowing engineers to focus on higher-value ones.