AR VR AND MR FOR INDUSTRY 4.0

Abstract

Industry 4.0, the fourth industrial revolution, has attracted much attention in recent literatures. Over the last few years, manufacturing companies have been facing various challenges particularly related to volatile demand and changing requirements from customers and suppliers, equiring new technological roadmaps and interventions in manufacturing systems. In this proactive context, innovative technologies support the creation of information processes aimed at workers. With this in mind, Augmented Reality, Virtual Reality and Mixed Reality can be adopted for workforce training; they should interact with a human workforce in an efficient way. Therefore, the purpose of this study is to conduct a qualitative literature review in order to investigate the current state of these innovative technologies and their practical application in industrial systems defining their core characteristics.

The ultimate objective of any industry which is currently into digital-transformation is to create new business models which can Increase their productivity, safety & profitability. While most enterprises having a keen focus on 'How to make their machines & processes smarter' overlook the very serious fact that "only 20% of employees have the Skills needed for both their current roles and future career, according to Gartner, 2018".

A complementary qualitative part is used to underpin and extend the findings. It is found that, while technological aspects are of importance, organisational issues are more relevant for industry, which has not been reflected to the same extent in literature.