



## BYTE QUEST

Vasavi College of Engineering

Department of Computer Science and Engineering

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Byte Quest is the article published by the CSE dept of Vasavi College of Engineering regarding the latest innovative Technologies and Software that have been emerged in the competitive world. The motto of this article is to update the people regarding the improvement in technology. The article is designed by the active participation of students under the guidance of faculty coordinators.

□ Good, bad or indifferent if you are not investing in new technology, you are going to be left behind.

-Philip Green

□ Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.

-Stewart Brand

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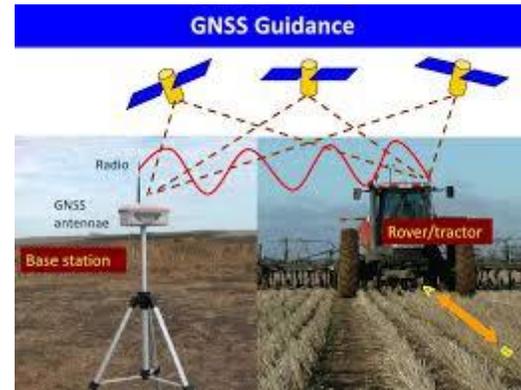
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## GNSS

“The adoption of digital technologies in agriculture has been increasing at a rapid pace”. The development and implementation of precision agriculture or site-specific farming has been made possible by combining the Global Navigation Satellite System (GNSS) and geographic information systems (GIS). These technologies enable the coupling of real-time data collection with accurate position information, leading to the efficient manipulation and analysis of large amounts of geospatial data. GNSS-based applications in precision farming are being used for farm planning, field mapping, soil sampling, tractor guidance, crop scouting, variable rate applications, and yield mapping.

GNSS allows farmers to work during low visibility field conditions such as rain, dust, fog, and darkness.



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## MIXED REALITY



Mixed reality (MR), sometimes referred to as hybrid reality is the merging of real and virtual worlds to produce new environments and visualizations where physical and digital objects co-exist and interact in real time. Mixed reality takes place not only in the physical world or the virtual

Mixed reality fuses layered objects into the real world with an immersive digital world, allowing you to do things not possible in a strictly AR or VR digital environment. The cutting-edge paradigm shift into MR has been made possible with the *Microsoft HoloLens* - a headset that as the name would suggest, allows its users to overlay holograms from virtual worlds on top of regular old reality. Essentially, it creates the feeling of being present within a virtual environment.

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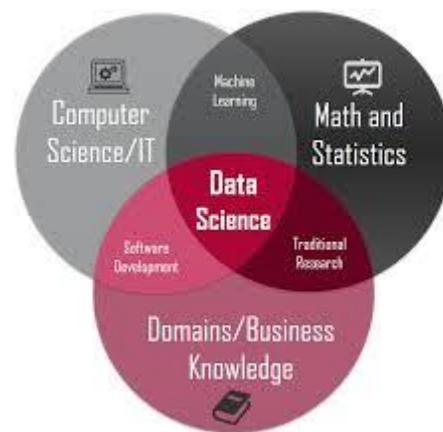
# DATA SCIENCE

Data scientists are a new breed of analytical data expert who have the technical skills to solve complex problems – and the curiosity to explore what problems need to be solved. They're part mathematician, part computer scientist and part trendspotter. And, because they straddle both the business and IT worlds, they're highly sought-after and well-paid. Who wouldn't want to be one? Many data scientists began their careers as statisticians or data analysts. But as big data (and big data storage and processing technologies such as Hadoop) began to grow and evolve, those roles evolved as well. Data is no longer just an afterthought for IT to handle. It's key information that requires analysis, creative curiosity and a knack for translating high-tech ideas into new ways to turn a profit.

What's in a data scientist's toolbox? Data visualization: the presentation of data in a pictorial or graphical format so it can be easily analyzed. Pattern recognition: technology that recognizes patterns in data (often used interchangeably with machine learning). Data preparation: the process of converting raw data into another format so it can be more easily consumed. Text analytics: the process of examining unstructured data to glean key business insights.

Machine learning: a branch of artificial intelligence based on mathematical algorithms and automation. Deep learning: an area of machine learning research that uses data to model complex abstractions.

We are at a crucial intersection in human history. We are dabbling with issues concerning Artificial Intelligence but honestly, we are at a pretty nascent stage of the whole ecosystem. It is time to come out from the snares of this illusory mindset, recognize our shortcomings and work together to build something great. The next steps will decide what we achieve for this current generation. Hope those next steps are in the right direction because we cannot mess up this opportunity.



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