Seminar on Augmented Reality

Event Date: 19th September, 2019

Event Speaker: Mr. Vishal Vijay Salvi (CRG Engineer, MICA Labs)

Augmented reality is a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view. It is an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information, sometimes across multiple sensory modalities,including visual, auditory, haptic, somatosensory and olfactory. A R can be defined as a system that fulfils three basic features: a combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects.

The overlaid sensory information can be constructive (i.e. additive to the natural environment), or destructive (i.e. masking of the natural environment). This experience is seamlessly interwoven with the physical world such that it is perceived as an immersive aspect of the real environment. In this way, augmented reality alters one's on going perception of a real-world environment, whereas virtual reality completely replaces the user's real-world environment with a simulated one. Augmented reality is related to two largely synonymous terms: mixed reality and computer-mediated reality.

Augmented reality is used to enhance natural environments or situations and offer perceptually enriched experiences. With the help of advanced AR technologies (e.g. adding computer vision, incorporating AR cameras into smartphone applications and object recognition) the information about the surrounding real world of the user becomes interactive and digitally manipulated. Information about the environment and its objects is overlaid on the real world. This information can be virtual or real, e.g. seeing other real sensed or measured information such as electromagnetic radio waves overlaid in exact alignment with where they actually are in space.

Augmented reality also has a lot of potential in the gathering and sharing of tacit knowledge. Augmentation techniques are typically performed in real time and in semantic contexts with environmental elements. Immersive perceptual information is sometimes combined with supplemental information like scores over a live video feed of a sporting event. This combines the benefits of both augmented reality technology and heads up display technology (HUD).

A seminar was held on 19th September, 2019 M.H. Saboo Siddik College of Engineering, organized by Er. Fatima Ansari and Er. Nafisa Mapari, in the classroom 403, of Computer Department. The seminar was conducted by Mr. Vishal Vijay Salvi. The overall Understanding of speaker and way he shared his knowledge over the topic was excellent. He were initially felicitated by Dr. Zainab Pirani ma'am, HOD of computer department, and further he introduced himself and his colleague present with him.

The seminar started with the speakers introducing themselves and then beginning to dive into the topic of the augmented reality along with the concept of Virtual reality and Mixed reality. The speaker spoke in brief about the above two topics and how they have relation with the current trends and development in the industry.

Once the basic idea was explained to the students about the above two topics, the Speaker came back to the topic of Augmented Reality by getting to the basics of what it means and how it is implemented and the technologies that have been developed.

Taking the topic of the development the speaker further explained the engines required for AR, the languages that are used in programming the AR system and how to embed them into the actual world scenarios. By the end of the session the speaker explained the students the need of AR engineers in the market and their salaries.

The session was ended with the students being shown two demonstration of hardware project, one of which was based on AR while the other was based on the application of Internet of Things (IoT), this gave the students to learn the theoretical as well as the practical aspects of the AR and a little curiosity on the idea of the IoT.

The Seminar ended with a vote of thanks by Er. Nafisa Mapari who organised this great seminar along with Er. Fatima Ansari for their students and the speakers were presented a bouquet and a gift along with it as a token of appreciation for sparing their time on the session.