DEPARTMENT OF COMPUTER ENGINEERING

CS413 Seminar

Academic Year: 2023-24 **Class: S7 C/D**

Seminar Approval Form

Date :

Roll No	KTU Reg No	Name	Signature
13	CHN20CS029	ANUGRAH SATHYAPAL	

Submit three seminar topic proposals with a very small description. At the end of each topic mention two major references of the topic you referred. Refer international journals of repute like IEEE / Elsevier / Springer/ other SCI indexed journals for selecting seminar topic. (Give the topics in your preference order)

Name of Topic 1: A Metaverse: Taxonomy, Components, Applications, and Open Challenges

Abstract: Unlike previous studies on the Metaverse based on Second Life, the current Metaverse is based on the social value of Generation Z that online and offline selves are not different. With the technological development of deep learning-based high-precision recognition models and natural generation models, Metaverse is being strengthened with various factors, from mobile-based always-on access to connectivity with reality using virtual currency. The integration of enhanced social activities and neural-net methods requires a new definition of Metaverse suitable for the present, different from the previous Metaverse. This paper divides the concepts and essential techniques necessary for realizing the Metaverse into three components (i.e., hardware, software, and contents) and three approaches (i.e., user interaction, implementation, and application) rather than marketing or hardware approach to conduct a comprehensive analysis. Furthermore, we describe essential methods based on three components and techniques to Metaverse's representative Ready Player One, Roblox, and Facebook research in the domain of films, games, and studies. Finally, we summarize the limitations and directions for implementing the immersive Metaverse as social influences, constraints, and open challenges

Ref1: S.-N. Suzuki, H. Kanematsu, D. M. Barry, N. Ogawa, K. Yajima, K. T. Nakahira, et al., "Virtual experiments in metaverse and their applications to collaborative projects: The framework and its significance", *Proc. Comput. Sci.*, vol. 176, pp. 2125-2132, Jan. 2020.

Ref2 B. Ryskeldiev, Y. Ochiai, M. Cohen and J. Herder, "Distributed metaverse: Creating decentralized blockchain-based model for peer-to-peer sharing of virtual spaces for mixed reality applications", *Proc. 9th Augmented Hum. Int. Conf.*, pp. 1-3, Feb. 2018.

Name of Topic 2:

Abstract:

Ref1:

Ref2:

Name of Topic 3:

Abstract:

Ref1

Ref2:

Guide's Name : Shiny B

Guide's Suggestion (if any**):**

Programme Assessment Committee (PAC):

1. Approved/Rejected 2. Approved/Rejected 3. Approved/Rejected
Selected Topic:

Seminar Co-ordinator HOD