SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
COLLEGE OF DESIGN AND ENGINEERING
Website: https://cde.nus.edu.sg/ece

Area: Signal Analysis & Machine Intelligence

Host: Dr. Qianli Xu (Co-Supervisor)
Assistant Professor Mike Shou Zheng (Supervisor)

TOPIC	:	**GazeVQA: A Video Question Answering Dataset for Multiview Eye-Gaze Task-Oriented Collaborations**
SPEAKER	:	**Mr. Muhammet Furkan Ilaslan** **Graduate Student, ECE Dept, NUS**
DATE	:	**Monday, 26 June 2023**
TIME	:	**11.00AM to 11.30AM**
VENUE	:	**Join Zoom Meeting:** **https://nus-sg.zoom.us/j/87383943054?pwd=RUxDQ0lSY1JuOHpRM1JUdFk0RDRrZz09** **Meeting ID: 873 8394 3054** **Passcode: 222290**

ABSTRACT

The usage of exocentric and egocentric videos in Video QA studies has not shown adequate attainment for robot-human interaction and collaboration studies, thus, the genuine contribution is included in the gaze information. In this paper, to equip a task with the ability to collaborate with the learning, we build a novel task-oriented video question-answering dataset for collaborative applications by gaze information called GazeVQA, additionally, inspired by the assisting models and common ground theory for industrial task collaboration applications, we propose a new task-oriented question driven AI model called AssistGaze.

The GazeVQA criterion is designed with a novel QA format which covers thirteen different reason types to obtain more informative answers. The GazeVQA consists of more than 2500 textual QA pairs, and 690 bounded images for each participant, additionally, more than 6.8K videos of 22 participants engaged in guided task implementation. The AssistGaze is an assistant which is a combination of three different downstream tasks to answer the questions with three different answer types which are textual, image, and video for visual perception and to disambiguate the semantic questions. Consequently, comprehensive experiments display the effectiveness of AssistGaze and demonstrate the formidable challenges of the GazeVQA.

BIOGRAPHY

Mr. Ilaslan is currently pursuing a Ph.D. degree in the School of Electrical and Computer Engineering at NUS. His supervisors are Assist. Prof. Mike Zheng Shou, and Dr. Qianli Xu. His research focuses on assistive models for Multiview Eye-Gaze Task-Oriented Human-Robot and Human-Human Collaboration Applications.

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