"Asmeany": An Andriod Application For Deaf And Hearing-Impaired People

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Abstract

As reported by the World Health Organization, more than 5% of the world's population suffers from disabling hearing loss [1]. This percent translates to a total of 466 million people which is not a small number [1]. Deaf and hearing-impaired people face several problems, which may affect their involvement and contribution to society. One of these problems is lacking of communication since sign languages that use by deaf people are not universal and use by everyone [2]. Nowadays, watching videos has become an important element in our life. In fact, society is increasingly being more dependent on technology on a daily basis. Every day, they watch videos for many purposes (learning, news, enjoy, etc…). However, deaf people face challenge and issue in watching and understanding the content of these videos. These people do not take the advantage of the video's content because there is no available text transcript for all videos [3]. Therefore, there is a need for providing a solution that empowering deaf and hearing-impaired people to take advantages of any videos' content to the fullest. Hence, this project will provide an IT solution, which is an android phone application that will facilitate and help them to understand the video's content (this is one of the communication problems) by providing videos' transcripts in English and Arabic. "asmeany" application will immediately afford the transcript after uploading any video. The application "asmeany" - in Arabic - means the application communicates with deaf and hearing-impaired people and says to them play the video, so I can write the transcript for you. The adopted development process of "asmeany" is the Scrum methodology. The authors will apply artificial intelligence (AI) techniques, especially the Natural Proccing Language (NLP) to afford the transcripts. "asmeany" will be an IT solution that could assist in solving one part of the communication problems that deaf and hearing-impaired people face every day.

Keywords
Deaf people , hearing-impaired, videos, android

Biographies

Samar Alahmadi is an undergraduate student of department of information system in the faculty of computing and information technology at the king abdulaziz university, Jeddah, Saudi Arabia. she attends Forty-ninth high school, Jeddah, where she graduated with a percentage of 99%. She has always deeply improved herself and take challenges to learn new skills, she was elected as a leader of the Islamic committee at KAU faculty of computing and information technology club, a role which she thoroughly enjoyed and which has drastically improved both her communication and leader skills. In this period, she organized many courses and events benefiting the university students.

Reem Alsulami is a student of Information Systems at the Faculty of Computing and Information Technology at King Abdulaziz University. She trained in the deanship building in KAU that boosted her skills and qualified her for the job market well, and implemented a project "Dalili" application, that uses augmented reality technology to guide beneficiaries to reach their desired destinations inside the building she also apply company program which is held by Injaz Saudi Arabia. she was in the "AR Tech" company in the product development that added experience to her in the field of leadership and entrepreneurship and worked within the team of courses that were held by the Deanship as courses diction and development skills, marketing skills, video design, and technical support. she also wanted to have the experience in hardware, therefore she took the course Arduino Robot and a course in the maintenance and repair of mobile phones. On the other hand, she attended some activities such as reverse engineering, dealing with different personality patterns, multiple Intelligences, Python and Assembly Workshops. Moreover, she has taken (Training of Trainers) TOT certificate accredited by KAU.

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