ABSTRACT

Completely Automated Public Turing test to tell Computers and Humans Apart (CAPTCHA) is a way to prevent bots from interfering through the system. By its development, CAPTCHA is divided into two methods, the Optical Character Recognition (OCR) method and the non-Optical Character Recognition (non-OCR) method. The difference between this two is the type of answer recognition used. The OCR method uses distorted words so that it cannot be recognized by bots, while the non-OCR method uses multimedia objects such as photos or sounds. So, in this final project, a CAPTCHA innovation was made using a non-OCR method by utilizing 3D objects as the identification of the answer. This CAPTCHA is implemented on the web using the Laravel framework and can be used on other websites with the same framework base. The result of this final project is a 3D CAPTCHA system using web-based Augmented Reality (AR) technology called ARTCHA, which stands for Augmented Reality CAPTCHA. To determine the feasibility of ARTCHA, a survey was made using a questionnaire on a Google form given to 25 respondents consisting of 5 software developers and 20 students. The results of the survey show that ARTCHA is recommended as a CAPTCHA innovation using AR with a value of 74% which is calculated using a Likert scale.

Keyword: CAPCTHA, 3D object, Laravel, Augmented Reality, AR.js.