



INFORMATION INSTITUTE OF TECHNOLOGY

in collaboration with

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BEng. (Hons) in Software Engineering

# **oCAPTCHA - Enhanced CAPTCHA Method using Image Orientation**

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## Abstract

Totally Automated Public Turing test to distinguish Computers and Humans (CAPTCHA) is a Turing test use challenge-reaction validation procedure to decide if the client of a web application is a genuine individual or a program. CAPTCHAs are computerized administrations and that will hinder the execution forms like mechanized projects or bots on web applications. In light of the CAPTCHAs are utilized to distinguish people and projects independently, it ought to be anything but difficult to understand for people and hard to settle for PCs.

A CAPTCHA comes in a few shapes, sizes and types. These all work very well against spam however some are more diligently to illuminate than others. Some are all the more intriguing than others and some will profit you fiscally on your site more than others. There are a lot of precedents however the most utilized ones today incorporate content acknowledgment, sound, picture acknowledgment, 3D and math questions.

Most of the commercial CAPTCHA implementations are word solving tasks and those are based on text recognition in an image. When accessing this kind of CAPTCHAs using mobile devices leads to some problems because of most of the CAPTCHAs are developed for desktop application and they are not suitable for mobile devices due to small screen sizes and limited options that have to interact with the users.

CAPTCHA breaking algorithms are also being introduced frequently. This implies an unsecured situation of the currently existing CAPTCHAs and requirement of new kinds of ideas or processes to identify computers and humans separately.

There is a lot of CAPTCHA ideas and researches that are going on introduce mobile friendly CAPTCHAs that are secure as well. Most of the suggested CAPTCHA ideas have some problems with usability or security. People who are accessing web applications through mobile devices are exponentially increasing over time. It is very important to introduce a mobile optimized CAPTCHA system that is secured as well, because existing CAPTCHAs do not satisfy both security and usability.