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**Abstract**

CAPTCHA is widely used security technique employed to avoid automated form submissions or verify user as human. An alternative CAPTCHA method based on pattern matching and number recognition ability is proposed in this paper, which verifies user as human and prevents bots to intervene and spam applications or services. This method is based on user gestures

which make it unique and secure. The biggest advantage of this new CAPTCHA technique is that it is simple and easy task conducted by user as it is language independent. It generates a random 4 character string number and shown to user. User should show gesture of particular characters in an order using computer webcam or using a mobile phone. A pattern matching algorithm is applied on those user images to identify gestures, and find matching. This method is very difficult to hack because designing a bot to identify gesture in image is not possible for now. Many experiments we conducted to prove accuracy of our technique.

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Computer Science

## Index Terms

Pattern Recognition

## Key words

CAPTCHA  
SIFT

Hand Gesture

Security

Key Points

reCAPTCHA

