A Project Report on

**FORGERY DETECTION IN DIGITAL IMAGES**

*Submitted in partial fulfilment of the requirements for the award of degree of*

**BACHALOR OF TECHNOLOGY**

*In*

**ELECTRONICS AND COMMUNICATION ENGINEERING**

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Miracle city, Bhogapuram, Andhra Pradesh.

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**CERTIFICATE**

This is to certify that the project report entitled **“FORGERY DETECTION IN DIGITAL IMAGES”** is submitted by**, xxxxxx (206C1A0XXX) xxxxxx (206C1A0XXX) xxxxxx (206C1A0XXX) xxxxxx (206C1A0XXX)**  in partial fulfilment of the requirements for the award ofDegree of **Bacholar of Technology in ECE**  from MIRACL Educational society Group of institutions Bhogapuram, affiliated to the JawaharlalNehru Technological University Gurajada vizianagaram, (JNTUGV), during the academic year 2023-2024, is a Bona fide work carried out by student under my guidance and supervision.

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**DECLARATION**

I hereby declare that the project report entitled **“AN OPTIMIZED DEEP LEARNINGALGORITHM FOR SPLICING DETECTION IN DIGITAL IMAGES”**

submitted to the JNTU Kakinada, is a record of an original work done by me under the guidance of **Mrs. jyotshna panigrahi** Asst.Professor in ECE Dept., and this project work issubmitted in the partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in **Electronics and Communication Engineering.**

The results shown in this report have not been submitted to any other University for the award of any degree.

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**ABSRACT**

Digital images are very necessary for various fields because of the availability of software and applications, which can create the images as looking reality. In the digital world, image modification is very easy because of the availability of several software applications. These are helped to manipulate or create every image as the real image. Moreover, these digital images act as a necessary role in various fields because of using many tools such as digital cameras and software. Image splicing also known as photo montage is a type of image forgery that involves compositing or combining two or more different images to create a fake image. Image splicing detection techniques have been developed to ensure whether the image content is modified after it was acquired. Image splicing detection would have huge impact in various application domains such as, crime investigation and detection, fashion industry, scientific journals, insurance claim processing, law enforcement, medical imaging, surveillance system and many others.

This method has lower computational complexity and high accuracy rate over the existing methods but not suitable for spatial feature based analysis. Hence, a new optimized wavelet based algorithm has been implemented with reduced multi dimensional scaling features to discover the spliced image regions which are blurred, brightness altered and colour reduced with different levels. Wavelet based method is inappropriate when the spliced region is rotated or scaled. So that we have developed an optimized deep learning algorithm to detect spliced region effectively. ). Here, the Action selection network (ASN) is a 5-layer network used to distinguishes the spliced image tampering. Results show that this method performs better than existing SIFT and SURF methods. Selection of optimum features from the extracted features is another significant phase in any splicing detection approach. This method is simulated using Python and the results prove the performance of an innovative method. Moreover, the obtained results are compared with recent existing approaches.

**Keywords:** Tampered images, Natural images, ,Neural networks.

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