



NARASARAOPETA ENGINEERING COLLEGE

(AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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BATCH NUMBER	AG1
TEAM MEMBERS	K. Harshitha (20471A0525) N. Keerthi Reddy (20471A0541) Sindhu Sri B (20471A0557)
GUIDE	Dr. S. N. Tirumala Rao, M.Tech., Ph.D
TITLE	Recognising Image Manipulations Utilising CNN and ELA
DOMAIN/TECHNOLOGY	DEEP LEARNING
BASE PAPER LINK	https://ieeexplore.ieee.org/document/10226188
DATASET LINK	https://www.kaggle.com/datasets/divg07/casia-20-image-tampering-detection-dataset
SOFTWARE REQUIREMENTS	Browser: Any latest browser like Chrome Operating System: Windows 7 Server or later Python (COLAB)
HARDWARE REQUIREMENTS	Processor: Intel® Dual Core 2.0GHz minimum Hard Disk: 1TB minimum RAM: 8GB or more

ABSTRACT

Image forgery is the tampering of digital photos. Because of ever-evolving technology, creating fake images is no longer difficult. In order to detect image forgeries, this paper proposes a model that employs Error Level Analysis (ELA) with Convolutional Neural Networks (CNN). ELA is used as a preprocessing step to highlight regions of an image that may have been tampered with. CNN is then trained on this enhanced data to classify images based on their authenticity and detect digital modifications. This initiative's main goals include image classification, attribute extraction, image authenticity verification, and digital image modification detection. Our suggested solution makes use of CNNs' deep learning capabilities and the refinement found by ELA.