Svādhyāya - International Journal of Transdisciplinary Research and Development (SIJTRD) ISSN Online : 2583-1739

Vol 2 (2), Dec 2022, pp 13 - 23

ANALYSIS OF DEEP LEARNING ARCHITECTURES APPLIED IN STEGANALYSIS

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ABSTRACT

Steganalysis has achieved importance in security as the capture of hidden messages lead to the avoidance of ruinous security incidents. Many CNN architectures have proved good accuracy in detection with 3 phases such as pre-processing, feature extraction and classification. Analysing those studies would give us a better knowledge for further study. This work does an analysis based on the performance of the popular and strong architectures in Steganalysis using Deep learning. Detection accuracy has been improved evenly every year by various architectures. Applying the same payload and using the same database, from the year 2015, when checked with same Steganographic algorithm (S-UNIWARD), accuracy increased from 69% by QIAN-Net in the year 2015 to 87.1% in the year 2021 by GBRAS-Net. The increase in accuracy could be noticed when applying different payloads.

KEYWORDS: *STEGANALYSIS, DEEP LEARNING, CONVOLUTIONAL NEURAL NETWORK, MACHINE LEARNING*