

# Subject: 2nd International Conference on Software, Systems and Information Technology (SSITCON-2025) : Submission (1680) has been created.



Microsoft CMT <noreply@msr-cmt.org>

to sunilkhemka.tech

Thu, Oct 16, 1

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Hello,

The following submission has been created.

Track Name: SSITCON2025

Paper ID: 1680

Paper Title: Malware Classification using Diluted Convolutional Neural Network with Fast Gradient Sign Method

## Abstract:

Android malware has become an increasingly critical threat to organizations, society and individuals, posing significant risks to privacy, data security and infrastructure. As malware continues to evolve in terms of complexity and sophistication, the mitigation and detection of these malicious software instances have become more time consuming and challenging particularly due to the requirement of large number of features to identify potential malware. To address these challenges, this research proposes Fast Gradient Sign Method with Diluted Convolutional Neural Network (FGSM -DICNN) method for malware classification. DICNN contains diluted convolutions which increases receptive field, enabling the model to capture dispersed malware patterns across long ranges using fewer features without adding parameters. Additionally, the FGSM strategy enhances the accuracy by using one-step perturbations during training that provides a more defensive advantage of lower computational cost. This integration helps to manage high classification accuracy while reducing the dependence on extensive feature sets. The proposed FGSM-DICNN model attains 99.44% accuracy while outperforming other existing approaches such as Custom Deep Neural Network (DCNN).

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