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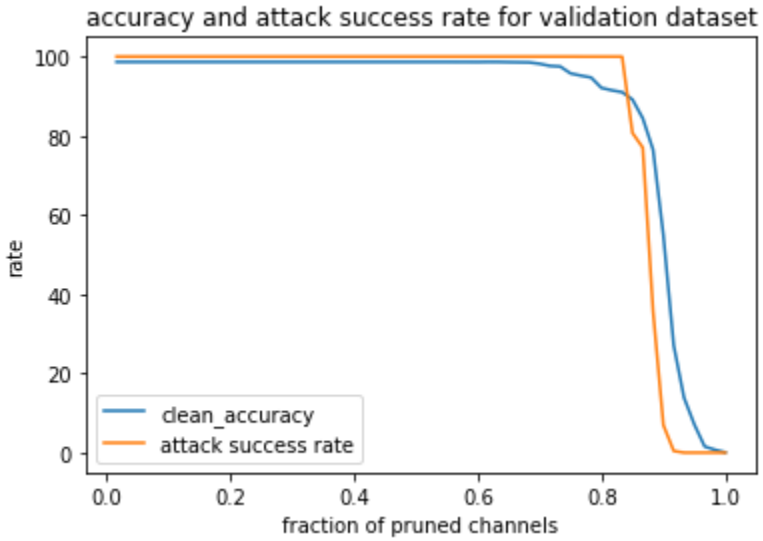
Introduction

The concept involves pruning the convolution layer by relying on the last average activation during pooling across the complete validation dataset. Consequently, it is necessary to perform pruning on the conv_3 layer. Following the specified guidelines, we are required to preserve the model when the accuracy experiences a decrease of at least {2%, 4%, 10%}. The designated models are named as model_X=2.h5, model_X=4.h5, and model_X=10.h5 for decreases of 2%, 4%, and 10%, respectively.

Performance analysis

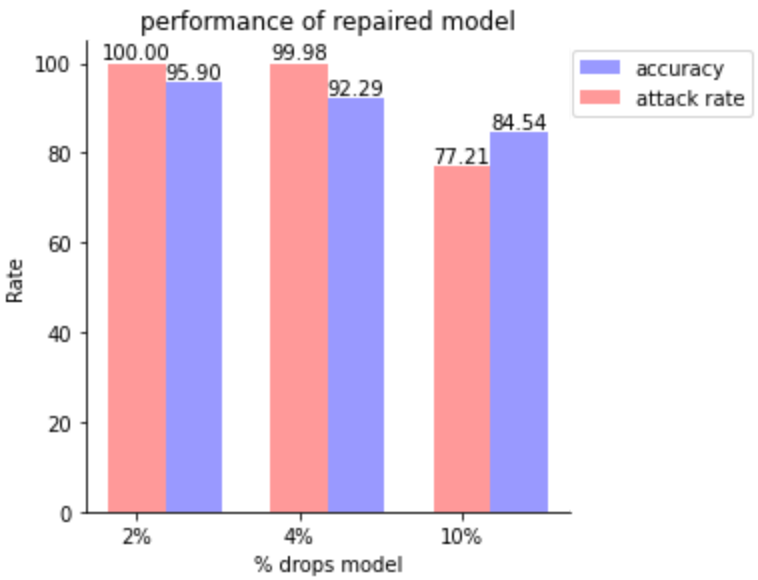


Plot for Performance Analysis: Accuracy vs Attack Rate

After pruning the pool 3 layer, we measure the statistics and save 3 models at 2% accuracy drop threshold, 4% accuracy drop threshold, and 10% accuracy drop threshold. These are the performance figures for the pruned models

Performance of Pruned Model Variants

Model	text_acc	Attack_rate
repaired _2%	95.900234	100.000000
repaired_4%	92.291504	99.984412
repaired_10 %	84.544037	77.209665



Performance of Custom Predictor Model Variants

Model	text_acc	Attack_rate
CustomPredictor _2%	95.900234	100.000000
CustomPredictor_4%	92.291504	99.984412
CustomPredictor_10 %	84.544037	77.209665