Viterbi Internship - Final Work Report

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July 6, 2017

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1 Abstract

2 Introduction

The work is done as a part of the MediFor Project. The MediFor project aims at pushing the state of the art research in the field of media forensics which in broad sense deals with the tampering of the media (image, video or audio) and its detection. This work only deals with image forensics. For each manipulated image the MediFor project demands the actual image on which manipulation is done (this is called the baseline image), the kind of manipulation, and in case of splice manipulation where one image is spliced onto another image it also demands the donor image. This work focuses only on the first part, where the aim is to find the baseline image. It is assumed that the world set contains the true baseline image. All experiments are done on Nimble Dataset which is publicly available for use.

3 Implementation Details

3.1 Datasets Used

The datasets used for this project are Nimble Datasets

Dataset version	# Probe Images	# World Images	# Provenance Images
NC2016	1124	874	-
NC2017 Dev1 Beta4	515	1631	65
NC2017 Dev3 Beta1	2261	4098	2157

The neural nets used for evaluations are

Neural Net Used	Dataset Trained on
AlexNet	Places365
AlexNet	ImageNet

3.2 Experiments

All experiments have been done on the Nimble Datasets.

4 Results

5 Discussion