



**IDENTIFYING FORGERY DETECTION
A PROJECT REPORT**

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BONAFIDE CERTIFICATE

Certified that this project report “**Identifying Forgery Detection**” is the bonafide work of **S.Kanmani -211320104005** and **S.Sowmiya – 211320104009** who carry out the project work under my supervision.

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ABSTRACT

Digital images are susceptible to a range of vulnerabilities and threats that can compromise security and privacy in online social networking sites. Image tampering attacks involve the unauthorized or deceptive alteration of digital images, often for the purpose of misrepresenting their content or context. Once the images are manipulated, it is hard for current techniques to reproduce the original contents. To address these challenges and combat image tampering, research on image tamper localization has garnered extensive attention. Image Processing and Machine Learning techniques have bolstered image forgery detection, primarily focusing on noise-level manipulation detection. Furthermore, these techniques are often less effective on compressed or low-resolution images and lack self-recovery capabilities, making it challenging to reproduce original content once images have been manipulated. In this context, this project introduces an enhanced scheme known as Image Immunizer for image tampering resistance and lossless auto – recovery using Vaccinator and Invertible Neural Network a Deep Learning Approach. Multitask learning is used to train the network, encompassing four key modules: apply vaccine to the uploaded image, ensuring consistency between the immunized and original images, classifying tampered pixels, and encouraging image self-recovery to closely resemble the original image. During the forward pass, both the original image and its corresponding edge map undergo transformation, resulting in the creation of an immunized version. Upon receiving an attacked image, a localizer identifies tampered areas by predicting a tamper mask. This proposed technique achieves promising results in real-world tests where experiments show accurate tamper localization as well as high-fidelity content recovery

TABLE OF CONTENT

C. NO	TITLE	PAGE NO
	Abstract	iv
	List Of Figures	viii
	List Of Symbols	ix
1	Introduction	1
	1.1. General Introduction	1
	1.2. Importance Of The Study	5
	1.3. Problem Statement	6
	1.4. Aim And Objective	7
	1.5. Scope And Limitation Of The Study	7
	1.6. Contribution Of The Study	8
	1.7. Outline Of Report	9
2	Literature Review	10
3	Methodology	18
	3.1. Existing System	18
	3.2. Proposed System	19
4	System Configuration	27
	4.1. Hardware Requirements	27
	4.2. Software Requirements	27
5	System Design	28
	5.1. System Architecture	28
	5.2 Use Case	29
	5.3 Class Diagram	30

	5.3 Activity Diagram	31
	5.4 Sequence Diagram	32
	5.5 Collaboration Diagram	33
	5.6 Deployment Diagram	34
	5.7 Er Diagram	35
	5.8 Data Flow Diagram	36
6	Project Description	37
	6.1. Deep Learning	37
	6.1.1. Multi Task Learning	37
	6.2. Invertible Neural Network	39
	6.3 Dataset Details	40
	6.4 Performance Analysis	40
	6.5 Performance Measures	41
	6.6 Input & Output	43
	6.6.1. Input Design	43
	6.6.2. Output Design	44
7	Implementation	47
	7.1 Source Code	47
8	Testing	64
	8.1 Testing Objectives	64
	8.2 Types Of Testing	64
	8.3 Unit Testing	64
	8.4 Functional Testing	64
	8.5 White Box Testing	64

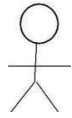
9	Conclusion And Future Enhancement	65
	9.1. Conclusion	65
	9.2 Future Enhancement	66
10	Result & Discussions	67
	10.1 Results	67
	10.2 Experimental Results	68
	10.3 Discussion	78
11	References	79

LIST OF FIGURES

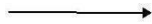
FIGURE NO	NAME OF THE FIGURE	PAGENO
5.1	Architecture Diagram	13
5.2	Activity Diagram	14
5.3	Class Diagram	15
5.4	Data Flow Diagram	16
5.5	Use Case Diagram	17
5.6	Sequence Diagram	18
6.9	Architecture of INN	39
10.0	Mount the Flask app	47
10.1	Open the Flask app	48
10.2	Load the Flask app	49
10.3	Home page	50
10.4	Tumour prediction result	51
10.5	Another result	52

LIST OF SYMBOLS

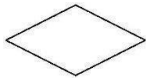
SYMBOLS



Actor



Flow Direction



Decision



Initial



Final