

COLLEGE OF ENGINEERING KIDANGOOR

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SEMINAR REPORT

ON

**FINGERPRINT LIVENESS DETECTION USING CONVOLUTIONAL
NEURAL NETWORK AND FINGERPRINT IMAGE ENHANCEMENT**

SUBMITTED BY

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*In partial fulfillment of the award of the Degree of
Bachelor of Technology in
Computer Science and Engineering*



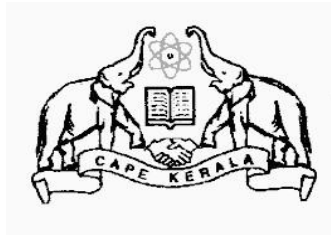
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CERTIFICATE

*This is to certify that this seminar work titled **Fingerprint Liveness Detection using Convolutional Neural Network and Fingerprint Image Enhancement** is the bonafide record of the work done by **Mrudhula M Nair** towards the partial fulfillment of the award of the degree of Bachelor of Technology in **Computer Science and Engineering**, by the **A P J Abdul Kalam Technological University**.*

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ABSTRACT

Use of a biometric authentication system is growing recently. Because of that, spoof fingerprint detection has also become important. There are several algorithms used in the fingerprint liveness detection. Some of them are software based and some others are hardware based. With the fast growth in software technologies, now we mostly concentrate on software based methods. Here a software based technology; Convolutional Neural Network is implemented. Along with this a fingerprint image enhancement technique is also used in order to provide clear image for classification after the convolution.

TABLE OF CONTENTS

1. INTRODUCTION.....	1
2. BACKGROUND.....	3
2.1 CONVOLUTIONAL NEURAL NETWORK	3
2.1.1 HISTORICAL BACKGROUND.....	3
2.1.2 WHY USE CONVOLUTIONAL NETWORK ?.....	4
3. LITERATURE REVIEW.....	5
4. PROPOSED METHOD.....	6
4.1 STRUCTURE.....	7
4.2 IMPLEMENTATION TECHNIQUES.....	7
4.2.1 CONVOLUTIONAL NEURAL NETWORK.....	7
4.2.1.1 CONVOLUTION.....	9
4.2.1.2 SUBSAMPLING.....	10
4.2.1.3 POOLING.....	10
4.2.2 FINGERPRINT IMAGE ENHANCEMENT.....	11
4.2.2.1 IMAGE SEGMENTATION.....	12
4.2.2.2 IMAGE LOCAL NORMALIZATION.....	14
4.2.2.3 ORIENTATION ESTIMATION.....	14
4.2.2.4 RIDGE FREQUENCY ESTIMATION.....	15
4.2.2.5 GABOR FILTERING.....	16
4.2.2.6 IMAGE BINARIZATION.....	16
5. COMPARISON CHART.....	17
6. CONCLUSION.....	18
7. REFERENCES.....	19
APPENDIX I.....	21