

PROJECT TITLE

A PROJECT REPORT

Submitted by

STUDENT1 NAME [REG NUM]

STUDENT2 NAME [REG NUM]

Under the Guidance of

(GUIDE NAME)

(Designation, Department of Networking and Communications)

in partial fulfillment of the requirements for the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

with specialization in (SPECIALIZATION NAME)



DEPARTMENT OF NETWORKING AND COMMUNICATIONS

COLLEGE OF ENGINEERING AND TECHNOLOGY

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

KATTANKULATHUR- 603 203

NOV 2024



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SRM Institute of Science & Technology
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ACKNOWLEDGEMENT

I / We express our humble gratitude to **Dr. C. Muthamizhchelvan**, Vice-Chancellor, SRM Institute of Science and Technology, for the facilities extended for the project work and his continued support.

I / We extend our sincere thanks to Dean-CET, SRM Institute of Science and Technology, **Dr.T.V. Gopal**, for his invaluable support.

I wish to thank **Dr. Revathi Venkataraman, Professor & Chairperson**, School of Computing, SRM Institute of Science and Technology, for her support throughout the project work.

I / We are incredibly grateful to our Head of the Department, **Dr. M. Lakshmi**, Professor and Head, Department of Networking and Communications, School of Computing, SRM Institute of Science and Technology, for her suggestions and encouragement at all the stages of the project work.

I / We want to convey our thanks to our Project Coordinator, **Dr. G. Suseela**, Associate Professor, Panel Head, **Panel Head Name**, Professor and members, **Panel Member Name 1, Designation 1, Panel Member Name 2, Designation 2, Panel Member Name 3, Designation 3**, Department of Networking and Communications, School of Computing, SRM Institute of Science and Technology, for their inputs during the project reviews and support.

I / We register our immeasurable thanks to our Faculty Advisor, **FA NAME**, Department of Networking and Communications, School of Computing, SRM Institute of Science and Technology, for leading and helping us to complete our course.

My / Our inexpressible respect and thanks to my / our guide, **<<Guide Name>>**, Assistant Professor, Department of Networking and Communications, SRM Institute of Science and Technology, for providing me/us with an opportunity to pursue our project under his/her mentorship. She provided me/us with the freedom and support to explore the research topics of my/our interest. Her passion for solving problems and making a difference in the world has always been inspiring.

I / We sincerely thank the Networking and Communications department staff and students, SRM Institute of Science and Technology, for their help during our project. Finally, I/ we would like to thank parents, family members, and friends for their unconditional love, constant support, and encouragement.

<Student Name 1 [Reg No]>

<Student Name 2 [Reg No]>



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BONAFIDE CERTIFICATE

Certified that 18CSP107L project report titled “**PROJECT TITLE**” is the bonafide work of “**STUDENT1 NAME [REG NUM], STUDENT2 NAME [REG NUM]**” who carried out the project work[internship] under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form any other project report or dissertation based on which a degree or award was conferred on an earlier occasion on this or any other candidate.

Name

Designation
Department of Networking and
Communications

Dr. LAKSHMI M

Professor and Head
Professor
Department of Networking and
Communications

Examiner I

Examiner II

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ABSTRACT

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ABBREVIATIONS

AES	Advanced Encryption Standard
ANN	Artificial Neural Network
CNN	Convolutional Neural
CV	Computer Vision
DB	Database

CHAPTER 1

INTRODUCTION

About the chapter 4 lines

1.1 Subtitle 1

Font style for entire report must be times new roman. Chapter number and title must be capitalized with font size of 16pt bold. Subtitle 1 is 16pt with each word capitalized with bold. Subsection under a subtitle is 12pt with bold, each letter capitalized. All the content of the document is 12pt size with 1.5 Spacing. Left margin 1 inch and right margin 0.5 inch. Use justify option for both left and right alignment. A paragraph may contain maximum of 12 lines and an empty space to be left between each paragraph.

All figures must be numbered with corresponding chapter number like Fig 1.1, Fig 1.2 etc for chapter 1 and Fig 2.1, Fig 2.2 etc for chapter 2 and so on.. with figures in center alignment and the caption to be mentioned below the figure.

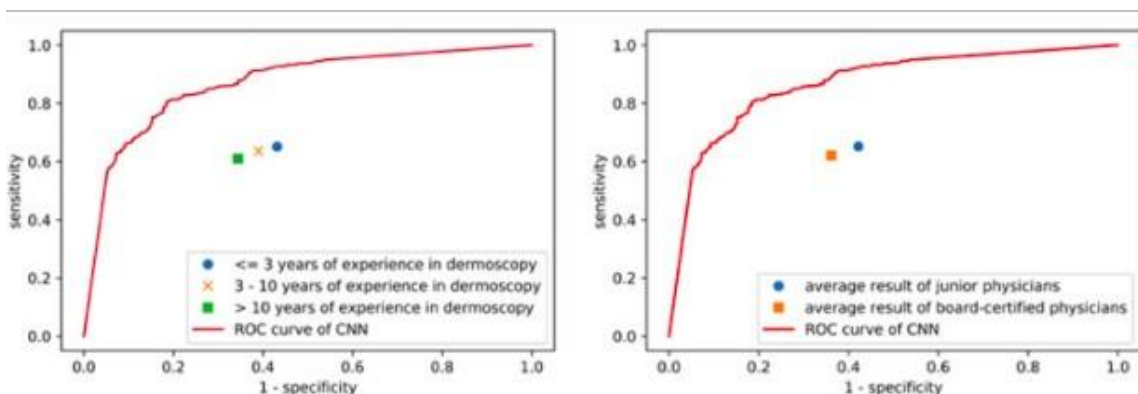


Figure 1.1: ROC curve CNN and dermatologists

All tables must be numbered with corresponding chapter number like Table 1.1, Table 1.2 etc for chapter 1 and Table 2.1, Table 2.2 etc for chapter 2 and so on.. with tables in center alignment and the caption to be mentioned above the Table.

Every chapter must start in new page. Page numbers are started from chapter 1 and to be included till the end of the report. Page numbers can be given at the bottom of the page with center alignment.

All references must be cited inside the text with sequential numbers[1] and to be listed in the same order in references. Two articles can be cited as [4,5] and multiple references can be cited as [7-10]. Minimum 15 references to be included.

Proofs must be included for all publications and plagiarism report to be generated using turnitin with the help of your guide with similarity index less than or equal to 10 percent. Total number of pages in the report is minimum 30 excluding coding and screenshots.

REFERENCES

- [1] Hernández, E., Sanchez-Anguix, V., Julian, V., Palanca, J., Duque, N, “Rainfall Prediction: A Deep Learning Approach”, In: Martínez-Álvarez, F., Troncoso, A., Quintián, H., Corchado, E. (eds) Hybrid Artificial Intelligent Systems. HAIS 2016. Lecture Notes in Computer Science(), vol 9648. Springer,2016, Cham. https://doi.org/10.1007/978-3-319-32034-2_13
- [2] K. G, Y. Sushmitha, K. L. Saranya, P. Naga Ramya Sri and P. Amulya, "Rainfall Prediction Using Deep Learning and Machine Learning Techniques," 2023 International Conference on Advances in Computing, Communication and Applied Informatics (ACCAI), Chennai, India, 2023, pp. 1-7, doi: 10.1109/ACCAI58221.2023.10199905.

APPENDIX A

CONFERENCE PRESENTATION

Our paper on **Hybrid application based skin lesion analyzer using deep neural networks** was presented at ICIOT 2020 conference held at SRM. 200+ shortlisted teams presented their papers on various fields in the conference. Our paper got accepted as paper id : 25 with a plagiarism of just 2 %.

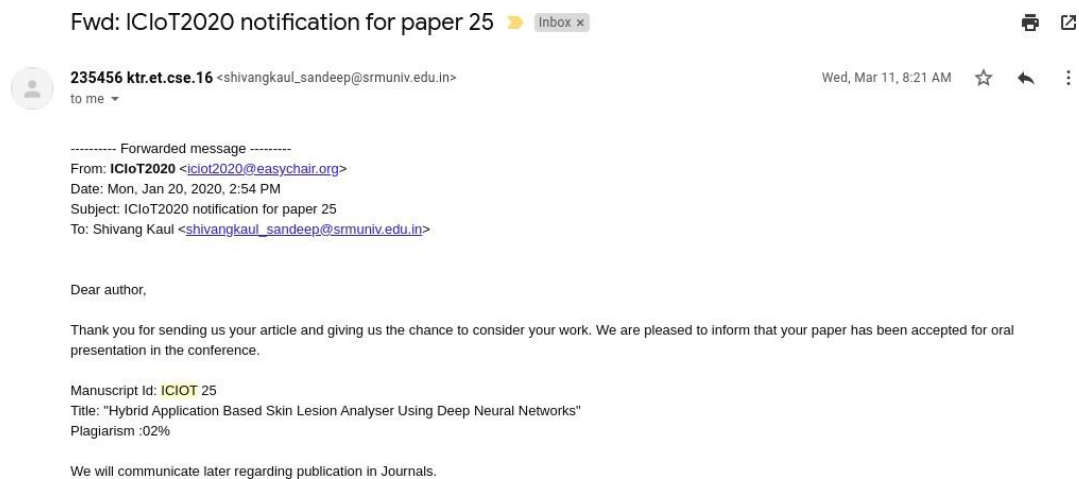


Figure A.1: ICIOT 2020 Acceptance

On presenting the paper in this international conference held at SRM KTR campus, we received positive remarks and suggestion from the judging panel. We were then awarded the best paper award at the same conference.



Figure A.2: ICIOT 2020 Best Paper award

APPENDIX B

PUBLICATION DETAILS

We submitted our research paper for publication at IJPR publication house puducherry. We had selected the journal **International Journal of Psychosocial Rehabilitation (ISSN: 1475-7192)**. We got the acceptance notification from the IJPR stating our paper has been published in the April Issue of the same journal. Proof of publication is attached in figure B.1 The research

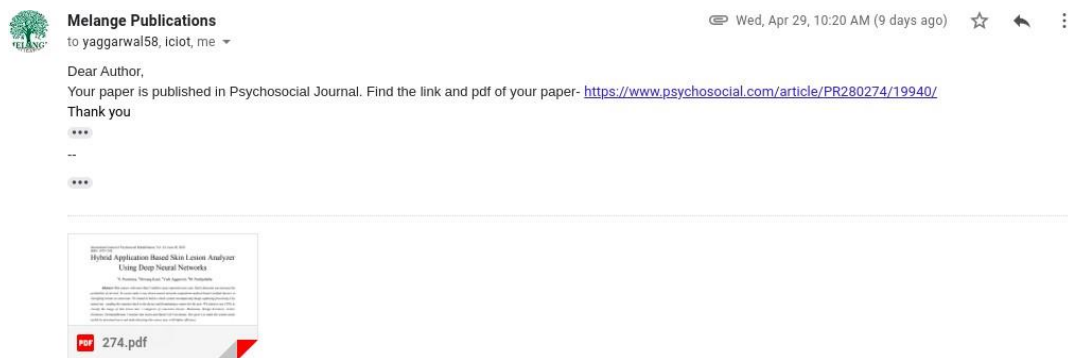


Figure B.1: Publication Notification

paper cover page has been attached below.

Hybrid Application Based Skin Lesion Analyzer Using Deep Neural Networks

¹S. Poornima, ²Shivang Kaul, ³Yash Aggarwal, ⁴M. Pushpalatha

Abstract--Skin cancer with more than 5 million cases reported every year. Early detection can increase the probability of survival. In recent study it was shown neural networks outperform medical board certified doctors in classifying lesions as cancerous. We intend to build a whole system encompassing Image capturing processing it by neural net, sending the response back to the device and formulating a report for the user. We intend to use CNNs to classify the image of skin lesion into 7 categories of cancerous lesions: Melanoma, Benign Keratosis, Actinic Keratoses, Dermatofibroma, Vascular skin lesion and Basal Cell Carcinoma. Our goal is to make the system easily usable by untrained users and make detecting skin cancer easy with higher efficiency.

Key words--Neural Networks, Image Processing, Convolutional Neural Networks, Skin Cancer Detection, Skin Lesion Imaging, App Development, Localization Algorithms, Cloud Computing, GCP, Compute Engine, App Engine.

I. INTRODUCTION

Skin Cancer is a major kind of cancer with around 5 million reported cases worldwide every year. The major cause of skin cancer is exposure to UV rays. Diagnosing skin cancer generally included the skin lesion being examined by a doctor. Recent studies have shown neural networks to be more efficient in classifying lesion as cancerous as compared to trained doctors. Misdiagnosing or late detection of cancer can lead to a higher mortality rate and less chance of cure. The goal of this project is making detection and classification of lesions on the skin easier. Not all the marks on skin are a matter of concern but early detection and treatment of cancer can save lives. So this gives the user a way to check if there's a chance of the mark on your skin being cancerous. The aim of this project is to detect and analyse such a correlation using neural networks. It is expected that the outcome of this project will lead to automated classification of skin lesions.

II. LITERATURE SURVEY

The following papers were read and analysed for the reference of this paper. A brief image has been presented here.

1) Andre Esteva et al. 2017," Dermatologist-level classification of skin cancer with deep neural networks."

Contribution: Claimed to classify skin lesions at par with board trained dermatologists. Methodology used:

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APPENDIX C

PLAGIARISM REPORT

Hybrid Application Based Skin Lesion Analyser using Deep Neural Networks

ORIGINALITY REPORT

3%

SIMILARITY INDEX

1%

INTERNET SOURCES

1%

PUBLICATIONS

2%

STUDENT PAPERS

PRIMARY SOURCES

Bioinformatics, 2013

Publication

<1%

8

Submitted to Study Group Worldwide

Student Paper

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9

Submitted to National Institute of Technology,
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PLAGIARISM REPORT

Format - I

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