SRI VENKATESWARA
COLLEGE OF ENGINEERING AND TECHNOLOGY

Thirupachur-631203, Tiruvallur TK & DT

Approved by AICTE New Delhi & Affiliated to Anna University, Chennai

(A Telugu Minority Institution)

LIST OF STUDENTS UNDERTAKING PROJECT WORK / INTERSHIP FOR THE

ACADEMIC YEAR (2022 – 2023)

PROGRAM NAME: MASTER OF COMPUTER SCIENCE AND ENGINEERING

BATCH NO	REGISTER NUMBER	STUDENT NAME	PROJECT TITTLE	NAME OF THE GUIDE
1	112421405003	T . V BRINDA	An Automated System For Accurate Skin Disease Diagnosis Using CNN ADSM Optimizer Algorithm	Mrs.R.Surekha Raj
2	112421405005	R.DEEPAK RAJ	Data Framework For Small Scale Provincial Farmers	Ms.J.Sangeetha
3	112421405009	J.JAYASREE	Kidney Stones Detection By Using Neural Network Classifier	Ms.J.Sangeetha
4	112421405007	K.FANCY	A Hybrid Cloud Approach For Secure Authorized Duplication System Using Facial Authentication	Mrs M.Divya
5	112421405015	S.SHILPA	Wather Image Classification Using Convolution Neural Network	Ms.M.Swetha
6	112421405016	M.VIJAYASREE	Covid 19 And Phenomena Classification Using Deep Learning Technique	Mrs. S.Divya
7	112421405013	M.R.PRAVEENDEV KUMAR	Smart Farming Voice Site Platform By Phone	Ms.J.Sangeetha
8	112421405002	G . BABY SHALINI	Demonstration Of Robotic Virtual Key Board Accessing	Ms.J.Sangeetha

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Engineering and Technology,

Thirupachur, Thiruvallur - 631 203

AN AUTOMATED SYSTEM FOR ACCURATE SKIN DISEASE DIAGNOSIS USING CNN WITH ADAM OPTIMIZER ALGORITHM

PROJECT REPORT

Submitted by

BRINDHA T V

in fulfilment for the award of the degree

of

MASTER OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

SRI VENKATESWARA COLLEGE OF ENGINEERING AND TECHNOLOGY

THIRUVALLUR-631203

ANNA UNIVERSITY: CHENNAI 600025
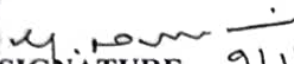
OCTOBER 2023

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Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report "AN AUTOMATED SYSTEM FOR ACCURATE SKIN DISEASE DIAGNOSIS USING CNN WITH ADAM OPTIMIZER ALGORITHM" is the bonafide work of "BRINDHA T V" who carried out the project work under my supervision.

SIGNATURE 9|10|23 .

Mr. M. NAMACHIVAYAM M.E.,
HEAD OF THE DEPARTMENT,
ASSITANT PROFESSOR,
SVCET, THIRUPACHUR,
THIRUVALLUR 631203.

For

SIGNATURE

Ms. R. SUREKHA RAJ M.E.,
SUPREVISOR,
ASSITANT PROFESSOR,
SVCET, THIRUPACHUR,
THIRUVALLUR 631203.

Submitted for the project work and viva-voce examination held on ......09|10|2023..................

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

ACKNOWLEDGEMENT

We are personally indebted to several people who gave us their useful insights to aid in our overall progress for this project. A complete acknowledgement would therefore be encyclopedic. First, we would like to give our deepest gratitude to our parents for permitting us to take up this course.

We extend our sincere gratitude to our respected **Chairman Dr. S.K. PURUSHOTHAMAN, Ph.D., Sri Venkateswara College of Engineering and Technology**, for providing facilities in the college premises for carrying out this project work.

We record our sincere thanks to **Dr. S. PALANI B.E., M.E., Ph.D., Principal of Sri Venkateswara College of Engineering and Technology**, for his encouragement to do this project.

We express our sincere thanks to **Mr. M. NAMACHIVAYAM, M.E., Head of the Department, Computer Science and Engineering**, for his immense support in doing this project.

We express our thanks to our **Internal Guide Ms. R. SUREKHA RAJ, M.E.,** Assistant Professor, Computer Science and Engineering Department, for her valuable guidance in completing this project successfully.

We express our sincere thanks to our entire department faculty members for their guidance and support to do this project.

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Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

An Automated System for Accurate Skin Disease Diagnosis using CNN with Adam Optimizer Algorithm

Abstract

Diagnosing the illness is one of the most critical aspects of the treatment process for any medical condition. When making diagnoses, dermatology is among the most unpredictable and complex of all medical specialties. A very effective medical decision support system that can classify skin lesions based on dermoscopic images is an indispensable instrument for determining skin cancer prognosis. Despite the fine-grained variety in its appearance, Convolution Neural Network with Adam Optimizer Algorithm (CNN-AOA) have made significant headway in diagnosing different types of skin cancer using dermoscopic images during the past few years. The hybrid deep learning approach is used in this study to construct an automated classification system for benign and malignant forms of skin cancer. The CNN-AOA model that has been presented is divided into four distinct categories, including pre-processing, feature extraction, segmentation, and classification. The acquired data from the dataset are pre-processed in preparation for data cleansing. During the segmentation phase, appropriate features are extracted from the pre-processed data. After we adopt a AOA to automatically configure a CNN model for an accurate, reliable, and robust automated skin lesion classification for early skin lesion diagnosis. The optimized CNN model uses public datasets to train and be able to detect abnormalities based on skin lesion features in different orientations. The findings also suggest that training and testing are more beneficial than acquiring new photos to achieve a higher performance level. This study proposes a system developed in MATLAB that can identify skin lesions and classify them as malignant or benign. The proposed diagnostic framework was tested on actual clinical skin lesions. Existing models, including the k-nearest neighbors' method (KNN), the Artificial Neural Network (ANN), and the Support Vector Machine (SVM), were shown to have minimal effect on the performance of prediction. The results of the experiments showed that it outperformed other contemporary methodologies in terms of the area under the accuracy, which was 99.12%, the sensitivity, which was 95.34%, and the specificity, which was 94.99%, and the computational time, which was 0.145 milliseconds.

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Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

CHAPTER 6

Conclusion

Dermoscopic images may allow skin cancer experts to detect the cancerous area manually, but it is still a difficult task for them, which is why automated methods to aid in the process have been developed. In this work, a novel method of skin cancer classification using hybrid deep learning and image processing is implemented. This study uses the hybrid deep learning approach to develop an automated classification system for malignant and benign skin cancer. The proposed CNN-AOA model is divided into four categories: pre-processing, feature extraction, segmentation, and classification. The dataset's collected data are pre-processed for data cleansing in the first step. Shape, color, and texture features are extracted in the second step, appropriate features are extracted from the pre-processed data in the segmentation phase, the data are then classified, and accurate output is obtained from the classification phase. Additionally, it also reduces the time in finding the result, as our system can provide the output almost instantly. Existing models such as k-nearest neighbors' algorithm (KNN), Artificial Neural Network (ANN), Support Vector machine (SVM) were discovered to have little impact on predictive performance. The simulation results based on real plant lab workloads show that the proposed approach can improve Accuracy, Sensitivity, Specificity, and computational time by 99.12%, 95.34%, 94.99%, and 0.145ms, respectively, when compared to the benchmark method.

Further enhancements to the work can be made by adding more hyper-parameters during the optimization phase, such as the regularization rate, activation functions, size and rate of the training. Additionally, we can also boost the model performance by using various optimization algorithms in the weight updating phase of CNN-AOA.

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
36Thirupachur, Thiruvallur - 631 203

Data Framework for Small Scale Provincial Farmers

By

R. DEEPAK RAJ

(112421405005)

A Report For Phase – II Of The Project

Submitted To The Faculty Of

COMPUTER SCIENCE AND ENGINEERING

in the partial fulfillment of the award of the degree

of

MASTER OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

SRI VENKATESWARA COLLEGE OF ENGINEERING AND TECHNOLOGY

THIRUPACHUR - 631 203

ANNA UNIVERSITY CHENNAI - 600 025

MAY - 2023

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Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

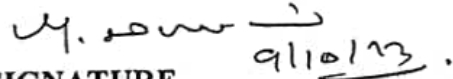# ANNA UNIVERSITY :: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this report titled **"Data Framework for Small Scale Provincial Farmers"**

forthe phase-2 of the project, is a bonafide work of

Mr. R. DEEPAK RAJ (112421405005)

who carried out the work under my supervision. for the partial fulfillment of the requirements for the award of the degree of **Master of Engineering** in computer science and engineering. Certified further that to the best of my knowledge and belief, the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or an award was conferred on an earlier occasion on this or any other candidate.

SIGNATURE   9|10|23.

Mr M . NAMACHIVAYAM, M.E.,

HEAD OF THE DEPARTMENT

Computer Science and Engineering

Sri venkateswara College of

Engineering & Technology

Thirupachur – 631 203

Thiruvallur Dt

SIGNATURE

Ms. J.SANGEETHA, M.E.,

SUPERVISOR

Computer Science and Engineering

Sri venkateswara College of

Engineering & Technology

Thirupachur – 631 203

Thiruvallur Dt

The report of the project work submitted by the above student for the project viva voce examination held on **09-10-23** has been evaluated.

PRINCIPAL

Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

INTERNAL EXAMINER

EXTERNAL EXAMINER

ACKNOWLEDGEMENT

A Project Of This Magnitude And Nature Requires Kind Co-Operation And Support From Many For Successful Completion. We Wish To Express Our Sincere Thanks To All Those Who Were Involved In The Completion Of This Project.

Our Sincere Thanks To The Honorable **CHAIRMAN** Of Our Prestigious Institution **PROF. Dr.S.K PURUSHOTHAMAN, (Ph.D).,** Sri Venkateswara College Of **Engineering And Technology** For His Sincere Endeavor In Educating Us In His Premier Institution.

We Also Express Our Gratefulness And Big Thankfull To Our Honorable **PRINCIPAL Dr. S. PALANI, ME (Ph.D).,** Who Very Much Helped Us In The Completion Of The Project.

We Wish To Convey Our Thanks And Gratitude To Our **Head Of The Department Mr . NAMACHIVAYAM, (M.E)** Department Of Computer Science & Engineering, For His Support And By Providing Us Time To Complete Our Project.

We Express Our Indebtedness And Gratitude To Our **Project Guide, Ms.J.SANGEETHA.,(M.E).,** Assistant Professor, Department Of Computer Science & Engineering For Her Guidance Throughout The Course Of Our Project.

"..We Express Our Heartly Thanks To Our Entire Department Faculty For Their Encouragement To Do This Project..,"

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Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

changes. To this end, we propose a scale-invariant, geometric feature descriptor that encodes the local plant arrangement geometry. The experiments suggest that we are able to register images taken over the crop season, including situations where matching with an off-the-shelf visual descriptor fails. We evaluate the accuracy of our matching system with respect to manually labeled ground truth. We furthermore illustrate that the reconstructed 3D models are qualitatively correct and the registration results allow for monitoring growth parameters at a per plant level.

- **ABSTRACT:**
- In the present article, it is presented the modeling and identification of an autonomous vehicle that has been designed for agricultural tasks. With the purpose of defining the best model structure, different models have been presented. Particularly, it is assumed that the lateral and longitudinal dynamics are decoupled dynamics, and based on this assumption these are modeled and identified in an isolated way. Particular emphasis was made in lateral and rotational dynamics. The
- vehicle under study is a quadricycle (ATV) that has been modified and adapted to work in an autonomous way. It has been presented simulation proofs and experimentation with the real vehicle that allows gua

- **Abstract:**
- Mobile terrestrial laser scanners (MTLS), based on light detection and ranging sensors, are used worldwide in agricultural applications. MTLS are applied to characterize the geometry and the structure of plants and crops for technical and scientific purposes. Although MTLS exhibit outstanding performance, their high cost is still a drawback for most

Conclusion:

Technology advances in agriculture is leveling the playing fields for small scale farmers in rural areas. The number of users who adopt such technology, however, is still relatively low. Understanding the factors promoting or limiting the acceptance and adoption of new information system is a key challenge.

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Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

KIDNEY STONE DETECTION BY USING NEURAL NETWORK CLASSIFIER

By

J. JAYASRI
(112421405009)

A Report For Phase-1 of The Project

Submitted To The Faculty Of

COMPUTER SCIENCE AND ENGINEERING

in the partial fulfillment of the award of the degree

of

MASTER OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

SRI VENKATESWARA COLLEGE OF ENGINEERING AND TECHNOLOGY

THIRUPACHUR - 631 203

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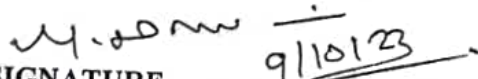
MARCH - 2023

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

ANNA UNIVERSITY :: CHENNAI 600 025
BONAFIDE CERTIFICATE

Certified that this report titled "**Kidney stone detection using neural network classifier**".for the phase-1 of the project, is a bonafide work of **Ms. J.JAYASRI (112421405009)**,who carried out the work under my supervision. for the partial fulfillment of the requirements for the award of the degree of **Master of Engineering** in computer science and engineering. Certified further that to the best of my knowledge and belief, the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or an award was conferred on an earlier occasion on this or any other candidate.

SIGNATURE 9|10|23

Mr. M.NAMACHIVAYAM, M.E.,

HEAD OF THE DEPARTMENT

Computer Science and Engineering

Sri venkateswara College of

Engineering & Technology

Thirupachur – 631 203

Thiruvallur dt

SIGNATURE

Ms. J.SANGEETHA, M.E.,

SUPERVISOR

Computer Science and Engineering

Sri venkateswara College of

Engineering & Technology

Thirupachur – 631 203

Thiruvallur dt

The report of the project work submitted by the above student for the project viva voce examination held on 9|10|23 has been evaluated.

9|10|23

INTERNAL EXAMINER

9|10|23

EXTERNAL EXAMINER

PRINCIPAL

Sri Venkateswara College of

Engineering and Technology,

Thirupachur, Thiruvallur - 631 203

ABSTRACT

Kidney stone disease is a common problem amongst the western population. Most kidney stones are small and pass spontaneously. These patients often need no further treatment. However, some nephrolithiasis patients develop large stones, which can cause significant morbidity in the form of acute symptoms and chronic complications if they are not treated. Yet effective treatment and prevention may eradicate the disease completely to overcome this we proposed wavelet approach avoids both log and exponential transform, considering the fully developed speckle as additive signal-dependent noise with zero mean. The proposed method throughout the wavelet transform has the capacity to combine the information at different frequency bands and accurately measure the local regularity of image features and watershed algorithm enhance the image in the quality way and it classifies with the Neural network. So, we need to study about image processing for it. After that you will be able to find the process to detect the kidney stone detection. For that purpose, we are taking our trendy methodologies for it. These are the first steps for our project. Now take a better step to taking of input images using CT images of the kidney from the known data set. To detect kidney stone in early stage we use pre-process, segmentation, feature extraction of GLCM and neural network classification of algorithm.

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CHAPTER 9
CONCLUSION AND FUTURE ENHANCEMENTS

CONCLUSION

The proposed work is advantageous for recongnizing kidney stones From CT scan pictures with less processing instant and achieves great accuracy. Accurancy is a tremendously crucial parameter in the medical field so in the future other techniques and filter may helpful for accuracy enhancement and Detecting multiple stone in kidney

FUTURE ENHANCEMENTS

For future work, the plan is to investigate how to generate better performance so we plan to investigate how to combine different methods to generate better prediction performance.

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Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

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A HYBRID CLOUD APPROACH FOR SECURE AUTHORIZED DEDUPLICATION SYSTEM USING FACIAL AUTHENTICATION

A PROJECT REPORT

Submitted by

FANCY K

In partial fulfillment for the award of the degree

Of

MASTER OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

SRI VENKAYESWARA COLLEGE OF ENGINEERING AND

TECHNOLOGY

THIRUVALLUR-631203

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

ANNA UNIVERSITY: CHENNAI 600 025

MARCH 2023

BONAFIDE CERTIFICATE

Certified that this project report **"A HYBRID CLOUD APPROACH FOR SECURE AUTHORIZED DEDUPLICATION SYSTEM USING FACIAL AUTHENTICATION"** is the bonafide work of **"FANCY K"** who carried out the project work under my supervision.

GNATURE 9/10/23.

SIGNATURE 9/10/23

Mr. M. NAMACHIVAYAM M.E.,
HEAD OF THE DEPARTMENT

ASSISTANT PROFESSOR,

SVCET,THIRUPACHUR,

THIRUVALLUR 631203.

Ms. DIVYA,M.E.,

SUPERVISOR,

ASSISTANT PROFESSOR,

SVCET,THIRUPACHUR,

THIRUVALLUR 631203.

Submitted for the project work and viva   voice examination held on......9/10/23

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

ii

ACKNOWLEDGEMENT

We acknowledge with heartfelt thanks and gratitude to several people who have given their valuable time for completion of this project in a successful manner. We would like to thank our Chairman Dr.S.K PRUSHOTHAMAN,ph.D., Sri Venkateswara college of Engineering and Technology, and our honorable Principal Dr. S.PALANI B.E,M.E,ph.d., for extending their co-operation by providing an opportunity to progress our work in our college.

First and foremost, we make a specific reference and prolific thanks to our Head of the Department, **Mr. M. NAMACHIVAYAM., M.E.,** Head of Department, Computer Science and Engineering Technology,

My deepest thanks to **Internal Guide Ms. M.DIVYA, M.E.,** the guide of our project foe guiding and correcting various documents of mine with attention and care. He has taken pain to go through the project and make necessary corrections when needed.

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

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CHAPTER – 9

CONCLUSION AND FUTURE ENHANCEMENT

9.1 CONCLUSION

In this Project, the notion of authorized data deduplication was proposed to protect the data security by including differential privileges of users in the duplicate check .In this project we perform several new deduplication constructions supporting authorized duplicate check in hybrid cloud architecture, in which the duplicate-check tokens of files are generated by the private cloud server with private keys.

As a proof of concept in this project we implement a prototype of our proposed authorized duplicate check scheme and conduct testbed experiments on our prototype. From this project we show that our authorized duplicate check scheme incurs minimal overhead compared to convergent encryption and network transfer.

Futures work: It excludes the security problems that may arise in the practical deployment of the present model. Also, it increases the national security. It saves the memory by deduplicating the data and thus provides us with sufficient memory. It provides authorization to the private firms and protects the confidentiality of the important data

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

WEATHER IMAGE CLASSIFICATION USING

CONVOLUTION NEURAL NETWORK

A PROJECT REPORT

Submitted by

S.SHILPA   (112421405015)

in partial fulfillment for the award of the degree

of

MASTER OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

SRI VENKATESWARA COLLEGE OF ENGINEERING AND TECHNOLOGY, THIRUPACHUR.

ANNA UNIVERSITY :: CHENNAI 600 025

OCTOBER 2023

1

BONAFIDE CERTIFICATE

Certified that this project report titled **"WEATHER IMAGE CLASSIFICATION USING CONVOLUTION NEURAL NETWORK"** is a bonafide work of **" S.SHILPA(112421405015)"**.who carried out the work under my supervision, for the partial fulfillment of requirements for the award of the degree of Master of engineering in computer science and engineering. Certified further that to best of my knowledge and bellied, the work reported award herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occ

SIGNATURE

Mr.M.NAMACHIVAYAM,,M.E.,

Assistant Professor,

Head of the Department,

Department Of CSE,

Sri Venkateswara College Of

Engineering And Technology.

Thirupachur,

Thiruvallur 631 203.

SIGNATURE

Ms.M.SWETHA.M.E.,

Assistant Professor,

Supervisor,

Department Of CSE,

Sri Venkateswara College Of

Engineering And Technology,

Thirupachur,

Thiruvallur 631 203.

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

2

ACKNOWLEDGEMENT

We take this opportunity to thank our beloved chairman **Dr.S.K.Purushothaman,.Ph.D,** Sri Venkateswara College of Engineering and Technology, for providing good infrastructure with regards to our project and giving enthusiasm in pursuing the studies.

We also express our thanks to our **principal Dr.S.Palani (B.E,M.E.,Ph.D).,** who has been constant source of inspiration and guidance through our course.

We would like to thank **Mr.M.NAMACHIVAYAM.,M.E. Head of the Department** of computer science and engineering for allowing us to take up this project and for his timely suggestions.

We express our sense of gratitude to **Mrs.M.SWETHA. M.E. internal project guide** for this help, through provoking discussions and invigorating suggestion with immense are, zeal throughout the work.

We are highly grateful our respective parents for their continuous support and encouragement to pursue our studies and to complete our project successfully.

At last, we thank all our teaching staffs, non-teaching staffs, classmates, seniors and juniors for their encouragement, advice an

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Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

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0.5 CONCLUSION:

> Convolution neural network is implemented to classify the weather into sunny, rainy etc. Different Convolutional neural network like manual CNN, AlexNet and LeNet are compared and AlexNet performed better and .h5 file is taken from that and that is deployed in GUI where it acts as an interface so that the image is uploaded and output is predicted based on given input whether it's sunny, rainy, shiny or cloudy.

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Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

COVID-19 & PNEUMONIA CLASSIFICATION USING DEEP LEARNING TECHNIQUE

A PROJECT REPORT

Submitted by

M.VIJAYASREE   112421405016

in partial fulfillment for the award of the degree
of

MASTER OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

SRI VENKATESWARA COLLEGE OF ENGINEERING AND
TECHNOLOGY, TIRUPACHUR.

ANNA UNIVERSITY :: CHENNAI 600 025

APRIL/MAY- 2023

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

1

BONAFIDE CERTIFICATE

Certified that this project report titled "**Covid-19 & pneumonia classification using Deep learning technique**" is the bonafide work done by M.VIJAYASREE(112421405016) who carried out the project work under my supervision.

SIGNATURE 9|10|23

Mr.M.NAMACHIVAYAM M.E

Head of the Department

Assistant Professor

Department of Computer Science

and Engineering

SRI VENKATESWARA COLLEGE OF

ENGINEERING AND TECHNOLOGY

Thirupachur,

Thiruvallur - 631 203

SIGNATURE 9/10/23

Mrs.S.DIVYA M.E

Project Guide

Assistant Professor

Department of Computer Science

and Engineering

SRI VENKATESWARA COLLEGE OF

ENGINEERING AND TECHNOLOGY

Thirupachur,

Thiruvallur - 631 203

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

2

ACKNOWLEDGEMENT

Presentation inspiration and motivation have always played a key role in the success of any venture.

We are grateful to our Chairman **Dr.S.K.PURUSHOTHAMAN, Ph.D., Sri Venkateswara College of Engineering and Technology,** for providing facilities in the college premises for carrying out this project work.

We express our sincere thanks to our principal **Dr.S.PALANI M.E.,Ph.D** for his innovative and valuable suggestion.

We pay our deep sense of gratitude to **Head of the Department and guide Mr.M.NAMACHIVAYAM, M.E** to encourage me to highest peak and to provide the opportunities to prepare the project and thankful to my co-ordinator who gave valuable ideas for enhancing the project.

We express our thanks to **Internal Guide Mrs.S.DIVYA M.E.,Assistant professor** for her encouragement and valuableguidance to complete the project successfully . my parents is also an important inspiration for me.

The authors are also thankful to all the fellow students who has directly or indirectly helped me in the successful completion of the project.

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

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CHAPTER 9

CONCLUSION

Convolutional Neural Network in Tensor flow, Keras learns from the dataset and train the model(CNN) so that it can identify the test image. After the model is trained successfully, the software can identify the disease if the plant species is contained in the dataset. After successful training and preprocessing, comparision of the test image and trained model takes place to predict the disease.

REFERENCES:

1.Gengfei Ling, Congcong Cao

2.Xi Ouyang ,JiayuHuo , Liming Xia , Fei Shan

3.Masahiro Hayashitani, EijiYumoto, Toshinori Hosoi, Masahiro Kubo.

4.Sing-Ling Jhuo, Mi-Tren Hsieh, Ting-ChienWeng, Mei-Juan Chen and Chieh-Ming Yang

5.Mei-Jung Lyu ,Shyan-Ming Yuan

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

Smart Farming Voice Site Platform By phone

PROJECT REPORT

Submitted by

M.R.PRAVEENDEVAKUMAR

(112421405013)

A Report for phase-II of the project submitted to the faculty of
COMPUTER SCIENCE AND ENGINEERING
in the partial fulfillment of the award of the degree

of

MASTER OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

SRI VENKATESWARA COLLEGE OF ENGINEERING AND

TECHNOLOGY

THIRUVALLUR-631203

ANNA UNIVERSITY: CHENNAI 600025

MARCH 2023

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Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report " Smart Farming Voice Site Platform By Phone" for the phase-2 of the project is bonafide work of

"PRAVEENDEVAKUMAR M.R" who carried out the project work under my supervision.

A Report For Phase-Ii Of The Project Submitted To The Faculty Of
Master Of Engineering Computer Science And Engineering
In The Partial Fulfillment Of The Award Of The Degree

SIGNATURE

Mr.M.NAMACHIVAYAM,M.E
HEAD OF THE DEPARTMENT,
ASSITANT PROFESSOR,
SVCET, THIRUPACHUR,
THIRUVALLUR 631203.

SIGNATURE

Ms.J.SANGEETHA,M.E
SUPREVISOR,
ASSITANT PROFESSOR,
SVCET, THIRUPACHUR,
THIRUVALLUR 631203.

Submitted for the project work and viva-voce examination held on ....09-10-2023............

INTERNAL

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology, EXTERNAL
Thirupachur, Thiruvallur - 631 203

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Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

Abstract:

Farming is a major input sector for economic development of any country. Livelihood of majority of population of the country like India depends on agriculture. In this project, we proposed to develop a Smart Farming System that uses advantages of cutting edge technologies such as IoT and Wireless Sensor Network to help farmers enhance the way farming is done. Using sensors like temperature, humidity, soil moisture etc. are used to get information about the field and help farmers to take precise decisions on insights and recommendations based on the collected data. The farmers are precisely two types, educated and uneducated. So, for the farmers who are uneducated, a message is sent to the mobile phone, so that he can get the info and he can supervise the field even by sitting in home. The farmers who are educated can check the webpage regularly, and can take their steps for better yield of the crop.

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CONCLUSION

IoT based smart farming system can prove to be very helpful for farmers since over as well as less irrigation is not good for farming. Threshold values for climatic conditions like humidity, temperature, moisture can be fixed based on the environmental conditions of that particular region. This system generates irrigation schedule based on the sensed real time data from field and data from the weather repository. This system can recommend farmer whether or not, is there a need for irrigation.

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Thirupachur, Thiruvallur - 631 203

DEMONSTRATION OF ROBOTIC VIRTUAL KEYBOARD ACCESSING

A PROJECT REPORT

Submitted by

BABY SHALINI.G

in partial fulfillment for the award of the degree

of

MASTER OF ENGINEERING
IN
COMPUTER SCIENCE AND ENGINEERING

SRI VENKATESWARA COLLEGE OF ENGINEERING AND

TECHNOLOGY,

THIRUPACHUR: THIRUVALLUR-631203

ANNA UNIVERSITY, CHENNAI

MARCH 2023

PRINCIPAL
Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

ANNA UNIVERSITY, CHENNAI

BONAFIDE CERTIFICATE

Certified that this project report "....DEMONSTRATION OF ROBOTIC VIRTUAL KEYBOARD ACCESSING...." Is the bonafide work of " BABY SHALINI G " (112421405002) who carried out the project work under my supervision.

SIGNATURE

MR. M. NAMACHIVAYAM M.E ,

HEAD OF THE DEPARTMENT,

ASSISTANT PROFESSOR,

SVCET, THIRUPACHUR ,

THIRUVALLUR DIST.

SIGNATURE

J. SANGEETHA .M. E

MR. INTERNAL GUIDE NAME,

INTERNAL GUIDE

SUPERVISOR,

ASSISTANT PROFESSOR,

SVCET,THIRUPACHUR,

THIRUVALLUR DIST.

Submitted for the project work and Viva-Voce Examination held on....9|10|23...

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Sri Venkateswara College of
Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

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Sri Venkateswara College of
78 Engineering and Technology,
Thirupachur, Thiruvallur - 631 203

Abstract

In the digital age, non-touch communication technologies are reshaping human-device interactions and raising security concerns. A major challenge in current technology is the misinterpretation of gestures by sensors and cameras, often caused by environmental factors. This issue has spurred the need for advanced data processing methods to achieve more accurate gesture recognition and predictions. Our study presents a novel virtual keyboard allowing character input via distinct hand gestures, focusing on two key aspects: hand gesture recognition and character input mechanisms. We developed a novel model with LSTM and fully connected layers for enhanced sequential data processing and hand gesture recognition. We also integrated CNN, max-pooling, and dropout layers for improved spatial feature extraction. This model architecture processes both temporal and spatial aspects of hand gestures, using LSTM to extract complex patterns from frame sequences for a comprehensive understanding of input data. Our unique dataset, essential for training the model, includes 1,662 landmarks from dynamic hand gestures, 33 postures, and 468 face landmarks, all captured in real-time using advanced pose estimation. The model demonstrated high accuracy, achieving 98.52% in hand gesture recognition and over 97% in character input across different scenarios. Its excellent performance in real-time testing underlines its practicality and effectiveness, marking a significant advancement in enhancing human-device interactions in the digital age.

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CONCLUSION

Software testing is an art. Good testing also requires a tester's creativity, experience and intuition, together with proper techniques.

- Testing is more than just debugging. Testing is not only used to locate defects and correct them. It is also used in validation, verification process, and reliability

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