VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI

A PROJECT REPORT ON

HUMAN ACTION RECOGNITION USING DEEP LEARNING TECHNIQUE

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

By

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ADARSH K M	4AL19IS003
MAYOORI K BHAT	4AL19IS025
SHREYA L	4AL19IS052

Under the guidance of

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2022-2023

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CERTIFICATE

This is to certify that the project entitled **"Human Action Recognition Using Deep Learning Technique"** has been successfully completed by

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10/5/23

Mr. NAGESH UB
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Name of the Examiners

1. Dr. Sudheer Shetty
2. Annappa Swamy. DR

Signature with Data

24/5/23

24/5/23

ABSTRACT

Recognizing human activities from videos is a difficult computer vision task that involves human action recognition. In this work, we offer a Mediapipe and LSTM based deep learning-based technique for human action recognition. Using Mediapipe, we decode human stance and movement information from videos, and then we feed the information into an LSTM network to categorize the actions. We test our method using a custom dataset that we collected under a number of difficult conditions, such as shifting lighting, shifting camera angles, and occlusion. On our custom dataset, our suggested method performs at the cutting edge, with a maximum accuracy of 92.40%. We run comprehensive tests to assess how well our method stands up to various scenarios, such as changing lighting conditions, shifting the camera's angle, and occlusion. In order to assess how each element of our strategy contributes to the overall result, we also perform ablation experiments. Potential applications for our suggested methodology include surveillance, sports analysis, and human-robot interaction, among other areas.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A PROJECT REPORT ON

AUTOMATIC IMAGE SEGMENTATION FOR THE DETECTION OF ILLNESS IN CASH CROPS THROUGH DEEP LEARNING

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

By

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Under the guidance of

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This is to certify that the project entitled "**Automatic Image Segmentation For The Detection of Illnesses in Cash Crops Through Deep Learning**" has been successfully completed by

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Prof.Jayanthkumar A Rathod **Associate Professor** **Project Guide**	**Dr. Sudheer Shetty** **Professor** **HOD ISE**	**Dr. Peter Fernandes** PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K

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ABSTRACT

Using deep learning to identify commercial crop diseases has become a research point in identifying plant diseases. However, recent research has shown that insufficient historical data and insufficient knowledge of crop images can lead to deep learning biases in the use of ideas. To solve this problem, in this paper, we propose a method to detect functional diseases using automatic image segmentation and deep learning of continuous data. An automatic image segmentation algorithm (AISA) based on the GrabCut algorithm has been developed to remove background information from the image while preserving the lesions. There is no need to manually select objects while rendering and the time cost is lower than the GrabCut algorithm. A DenseNet Convolutional Neural Network (CNN) model was chosen as the deep learning model and many clipping images and internet resources were added to expand the public knowledge. PlantVillage enhances all the capabilities of DenseNet. However, images processed by AISA can be used to eliminate some diseases, which reduces computational cost and improves the management of crop diseases. We have also developed commercial viruses for use on smart mobile devices.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A PROJECT REPORT ON

CROP RECOMMENDATION AND EARLY DETECTION OF DISEASES USING MACHINE LEARNING AND IMAGE PROCESSING

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

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This is to certify that the project entitled **"Crop Recommendation and Early Detection of Diseases using Machine Learning and Image Processing"** has been successfully completed by

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2. SUNIL KUMAR.S

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Jan 25/5/23

P. C 25-5-23

ABSTRACT

India is an Agriculture based economy whose most of the GDP comes from farming. The motivation of this project comes from the increasing suicide rates in farmers which may be due to low harvest in crops. Climate and other environmental changes have become a major threat in the agriculture field. Machine learning is an essential approach for achieving practical and effective solutions for this problem. Predicting yield of the crop from historical available data like weather, soil, rainfall parameters and historic crop yield. We achieved this using the machine learning algorithm. We did a comparative study of various machine learning algorithms i.e., K Nearest Neighbour, Random Forest and SVM.

Crop growth and yield are essential aspects that influence the field of agriculture as well as farmer economically, socially, and in every possible way. So, it is necessary to have close monitoring at various stages of crop growth to identify the diseases at right time. But, humans naked may not be sufficient and sometimes it would be misleading scenarios arise. In this aspect, automatic recognition and classification of various diseases of a specific crop are necessary for accurate identification.

The system will be trained using a large dataset of images of healthy and diseased leaves. It will be done by considering the properties like soil type, region, soil fertility and the condition of the weather and rain fall. Rain fall plays major role in agriculture because it is dependent on monsoon. The soil data and weather data is provided through the. Data mining and machine learning algorithm are used to predict the right crop, quantity of yield. The dataset will also include information about the type of disease present in the diseased leaf. The recommendations provided by the system will be based on the specific needs of the crops. The proposed system has the potential to significantly improve crop yields and reduce crop losses due to diseases and nutrient deficiencies.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A PROJECT REPORT ON

MISSING PERSON IDENTIFICATION USING CONVOLUTIONAL NEURAL NETWORK

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

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24/05/23

ABSTRACT

The Image Processing domain has become one of the trending Technology Today and under that, face recognition across aging has become very popular and challenging task in the area of face recognition. Many Technicians and Many researchers have contributed in this area, but still there is a significant gap to fill in. Selection of feature extraction and classification algorithms plays an important role in the area. Deep Learning with Convolutional Neural Networks provides a combination of feature extraction and classification in a single structure. CNN architecture has been used for solving the problem of aging for recognizing facial images across aging of a person. Extensive experimentations have been done to test the performance of the proposed system.

One of today's most popular methods in the image processing industry, face recognition that takes ageing into account is a challenging issue in the realm of facial identification. Despite the efforts of numerous professionals and researchers, a sizable gap still has to be addressed. Currently, automated computer systems the age disparities of a person are used for face recognition for personal identification however, present a significant challenge for it creating a suitable depiction of features and an the issue of an efficient matching framework for age-invariant facial recognition is still unresolved. It is vital for the field to select the appropriate feature extraction and classification techniques. A system that combines the extraction of features and classification is a single structure for convolutional neural network pattern recognition. By employing CNN architecture to distinguish facial photographs as a person matures, the issue of ageing has been resolved. The effectiveness of the suggested system has undergone extensive testing. We focused on employing the appropriate pre-processing methods and the periocular space as the model for identification because this region is stable or unchanged over the course of an individual's lifespan. To be more precise, we divided the merged facial characteristics into two independent components. Multi-task training and ongoing domain adaptation can be utilised to uncover traits associated with ageing through an attention mechanism.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY,BELAGAVI

A PROJECT WORK PHASE-2 REPORT ON

PLANT LEAF DISEASE DETECTION USING CNN ALGORITHM

Submitted in partial fulfillment of the completion of eighth semester,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE & ENGINEERING

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Ms. LOLAKSHI P K	**Dr. SUDHEER SHETTY**	**Dr. PETER FERNANDES**
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Name of the Examiners **Signature with Date**

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24/5/23

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ABSTRACT

Software's have always been a companion for human since the boomed invention of automation. All the automation which has been done till date always carried a motive for the ease of complex process and sometimes for replacing enormous human activities. The project presents plant leaf disease detection, effect of disease on plant yield and the remedies for its cure.In agriculture,research of automatic plant disease is essential one in monitoring large fields of plants, and thus automatically detect symptoms of disease as soon as they appear on plant leaves. Every other field has got some benifit from new technologies as compared to the agricultural field. According to past studies,42% of agricultural production is in loss and that too because of the increasing rate of loss due to plant leaf diseases.To overcome this major issue, this plant leaf disease detection technique can be applied to detect a disease from the input images.This process involved steps like image pre processing,image segmentation,feature extraction.Further convolutional neural network(CNN) classification is applied on the outcome of these three stages.Proposed implementation has shown 98.56% of accuracy in predicting plant leaf diseases. It also presents other information regarding a plant leaf disease that is Disease Name,Total Accuracy.

Index Terms - ImageSegmentation , MachineLearning , Plant Leaf Disease Detection.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI

A PROJECT REPORT ON

AUTOMATIC MUSIC CONTROL SYSTEM USING IMAGE PROCESSING AND MEDIAPIPE

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

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This is to certify that the project entitled **"Automatic Music Control System using Image Processing and Mediapipe"** has been successfully completed by

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Dr. Sudheer Shetty **Professor** **Project Guide**	**Dr. Sudheer Shetty** **Professor** **HOD ISE**	**Dr. Peter Fernandes** PRINCIPAL **Principal** Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K

Name of the Examiners

1. Dr Sudheer Shetty
2. Annappa Swamy. D.R.

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24/5/23

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ABSTRACT

The scope of our project is to control a music player using human gestures. This employs a camera along with an embedded system to segment human gestures and convert them to control signals in real-time. With the help of the Music Controller, one can simply wave or do a simple gesture of hand movement in front of the webcam which will in turn switch or pause the particular music track that was being played. Our project mainly focuses on scenarios where we are multitasking that is working on many applications at a time or running various programs at a time on our desktop and along with that listening to music in background that is music being played in one of the windows. At such times if we wish to pause or switch a particular music track we have to make some movements like switching to the music window and doing the desired operation.

A Project Report

On

PROTOCOLS FOR STORING, DISPLAYING, ERASING AND RETRIEVING PLAINTEXT IMAGESIN THE CLOUD USING WATERMARKING-BASED TECHNIQUE

Submitted to

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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In partial fulfilment of the completion of Eighth semester

Bachelor of Engineering

In

Information Science and Engineering

By

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This is to certify that the project work entitled **"PROTOCOLS FOR STORING, DISPLAYING, ERASING AND RETRIEVING PLAINTEXT IMAGES IN THE CLOUD USING WATERMARKING-BASED TECHNIQUE."** has been successfullycompleted by

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Dr. Sudheer Shetty **Professor** **Project Guide**	**Dr. Sudheer Shetty** **HOD, ISE**	**Dr. Peter Fernandes** **Principal, AIET**

External Examiners **Signature with Date**

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ABSTRACT

In this project, we propose secure plaintext image storage protocols in the cloud environment for image owners managing and controlling their outsourced images. To solve control and privacy issues, conventional schemes suggest outsourcing images in the encrypted form. However, encrypted images lose their usability and visibility. For example, image owners cannot quickly find their stored images in the cloud. The proposed protocols encourage plaintext image storage in the cloud with copyright protection of images, visible display, lossless retrieval and controlled deletion via techniques of homomorphic encryption and digital watermarking.

We allow the image owner to embed and remove the watermark in a privacy-preserving way without compromising the security of the original data and the computed results. Moreover, the image owner can securely detect the cloud's dishonest act of not completely deleting an image as required or leaking an image without permission. Compared with existing works, our work achieves more functions. We prove that the proposed work achieves the controllable management of the outsourced plaintext images without privacy leakage to unauthorized parties and demonstrate the utility and the efficiency of our protocols through experimental evaluation

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI

A PROJECT REPORT ON

INTEGRATED MACHINE LEARNING BASED SYMPTOM DIAGNOSIS AND PREDICTION SYSTEM

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

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This is to certify that the project entitled **"Integrated Machine Learning Based Symptom Diagnosis and Prediction System"** has been successfully completed by

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Sharan 19/5/22.		
Mr. Sharan L Pais	**Dr. Sudheer Shetty**	**Dr. Peter Fernandes**
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2. SUNIL KUMAR S	25-5-22.

ABSTRACT

In this study, machine learning methods are used to suggest an illness prediction model based on symptoms. The dataset used in this study includes a significant number of patients' symptoms and associated disorders. In order to extract pertinent information from the specified data for use in healthcare communities, biomedical fields, etc., these techniques are now used in machine learning environments as a result of their development and widespread use in a variety of real-world application areas (such as industry, healthcare, and bioscience). Accurate medical database analysis aids in disease early identification, patient treatment, and social assistance. Machine learning techniques have been effectively applied in a variety of areas, including the prediction of diseases. The goal of creating a classifier system applying machine learning algorithms is to significantly aid in solving health-related problems by enabling doctors in early illness prediction and diagnosis. This research work demonstrates the disease prediction system developed using Machine learning algorithms such as the Decision Tree classifier, Random Forest classifier, and Naive Bayes classifier.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A PROJECT REPORT ON

HEART DISEASE PREDICTION SYSTEM USING MACHINE LEARNING ALGORITHMS

Submitted in partial fulfilment for the award of Degree of,

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25-5-23
25/5/23

ABSTRACT

Heart disease is a major life threatening disease that can cause either death or a serious long term disability. However, there is lack of effective tools to discover hidden relationships and trends in e-health data. Medical diagnosis is a complicated task and plays a vital role in saving human lives so it needs to be executed accurately and efficiently. An appropriate and accurate computer based automated decision support system is required to reduce cost for achieving clinical tests. This paper provides an insight into machine learning techniques used in diagnosing various diseases. Various data mining classifiers have been discussed which has emerged in recent years for efficient and effective disease diagnosis. However using data mining technique can reduce the number of test that are required. In orderto reduce from heart diseases there have to be a quick and efficient detection technique. Decision Tree is one of the effective data mining methods used. This research compares different algorithms of Decision Tree classification seeking better performance in heart disease diagnosis. The algorithms which are tested are SVM algorithm, K Nearest Neighbour algorithm and Random Forest algorithm .

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI

A PROJECT REPORT ON

FOOD RECOGNITION AND CALORIE MEASUREMENT USING IMAGE PROCESSING AND CNN ALGORITHM

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

By

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MANISHA	4AL19IS023
PAWAN J ACHARYA	4AL19IS031
RAKSHITH	4AL19IS041

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MIJAR, MOODBIDRI D.K -574225

2022-23

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This is to certify that the project entitled **"Food Recognition and Calorie Measurement using Image Processing and CNN Algorithm"** has been successfully completed by

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Sharan 22/05/23.

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Name of the Examiners

1. Dr. Sudheer Shetty
2. Annappa Swamy, DR

Signature with Date

24/5/23

24/5/23

ABSTRACT

Our Food recognition and calorie measurement project will describe the relationship between nutritional ingredients identification in food and inspecting calories through Machine Learning models to perform the data analysis, the experiments on real life dataset to show that our method improves the performance with efficient accuracy. Also, our System will recommend food for some different age groups. This work is able to identify the Nutrition that we may get effected by lacking certain nutritional ingredients in our body and recommends the food that can benefit the rehabilitation of those Age groups. To achieve high accuracy and low time complexity, the proposed system implemented using CNN Machine Learning models.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI

A PROJECT REPORT ON

SKIN CANCER DETECTION USING MACHINE LEARNING

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

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2022-2023

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Name of the Examiners **Signature with Date**

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ABSTRACT

One of the most prevalent cancers in the world, skin cancer accounts for around one third of all diagnoses. Skin cancer is mostly brought on by unrepaired DNA breaks in skin cells, which lead to genetic errors or mutations on the skin. Due to the increased number of cases, high fatality rate, and expensive medical treatments, early detection of skin cancer indications is essential. Because of how dangerous these issues are, researchers have developed a number of early screening techniques for skin cancer. Using the characteristics of the lesion, such as its symmetry, colour, size, and form, skin cancer is discovered and benign skin cancer from melanoma is separated. Dermatologists use the fact that skin lesions are arranged in layers when reaching a diagnosis. Even board-certified dermatologists couldn't compete with CNN. Additionally, procedures that use machine assistance to identify cancer are more effective. Deep learning is a type of artificial intelligence that mimics how the human brain organises information and creates decision-making processes. In-depth investigation of deep learning techniques for skin cancer early detection is provided in this study. One of the most prevalent cancers in the world, skin cancer accounts for around one-third of all diagnoses. Skin cancer is mostly brought on by unrepaired DNA breaks in skin cells, which lead to genetic errors or mutations on the skin. Due to the increased number of cases, high fatality rate, and expensive medical treatments, early detection of skin cancer indications is essential.

A Project Report

On

DETECTING SLEEPINESS OF THE DRIVER USING IMAGE PROCESSING TECHNIQUE

Submitted to

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAVI, KARNATAKA- 590014

In partial fulfilment of the completion of Eighth semester

Bachelor of Engineering

In

Information Science and Engineering

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Mr. Pradeep V	**Dr. SUDHEER SHETTY**	**Dr. PETER FERNANDES**
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Name of the Examiners	**Signature with Date**
1. Dr. Sudheer Shetty	24/5/23
2. Annappa Swamy. DR	24/5/23

ABSTRACT

Drowsy driving is a serious problem that can lead to accidents and fatalities on the road. To address this issue, many researchers have explored the use of computer vision techniques to detect signs of driver drowsiness in real-time. Here , we propose a method for detecting driver drowsiness by analyzing eye closure using deep learning. Our method utilizes a camera to capture the driver's face and track the eye regions for analysis. We train the sequential model to classify eye closure patterns as indicative of drowsiness or alertness. To evaluate the effectiveness of our approach, we conduct experiments using a real-world driving dataset. Our results show that our method achieves high accuracy in detecting drowsiness and outperforms existing methods. We also discuss the limitations and future directions of our work. The proposed method has the potential to contribute to the development of safer driving technologies and reduce the number of accidents caused by drowsy driving.

A Project Report

On

IOT BASED MILK QUALITY MONITORING SYSTEM

Submitted to

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAVI, KARNATAKA- 590014

In partial fulfilment of the completion of Eighth semester

Bachelor of Engineering

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Name of the Examiners

1. J. A-Rathod
2. SUNIL KUMAR.S

Signature with Date

25/5/23

25-5-23

ABSTRACT

The demand for milk has significantly expanded in the present generation, which has increased the number of milk producers, numerous regional centers. The most crucial food source for children, expectant mothers, and adults is milk. High-quality milk is thick and free of impurities. Several adulterants are included to milk in order to maintain milk revenue and boost production. Since farmers provide a large portion of the milk, there is a danger that they will misinterpret the data if they are inexperienced. These adulterants can alter the consistency of milk. Recently, milk adulteration has been a significant social issue. Drinking contaminated milk may cause major health issues. Milk consistency and adulteration must be identified. The importance of food security in rural and urban areas cannot be overstated because it directly affects the wellbeing of citizens. Recent tests reveal that raw milk includes harmful organisms that, if consumed, might contaminate food and increase the rate of diseases and dissect the sense of satisfaction. As a result, developing tools for reliable and clever detection is necessary for quality control and for making wise and appropriate decisions. The project & main objective is to illustrate certain aspects of milk quantity and quality estimate.

A Project Report

On

TRAFFIC LANE DETECTION USING MACHINE LEARNING

Submitted to

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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In partial fulfilment of the completion of Eighth semester

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1. J.A.Rathod	25/5/23
2. SUNIL KUMAR.S	25-5-23

ABSTRACT

Lane detection is a crucial task in autonomous driving and advanced driver-assistance systems (ADAS). This abstract presents a comprehensive approach for lane detection utilizing a combination of state-of-the-art techniques. The proposed method incorporates the YOLOv3 algorithm, Canny edge detection, inverse perspective mapping (IPM), and sliding window approach.

Firstly, the YOLOv3 algorithm is employed to detect and localize objects in the input image, specifically focusing on identifying lane markings. By leveraging the robustness and accuracy of YOLOv3, lane boundaries can be accurately extracted. Next, Canny edge detection is utilized to enhance the lane markings detected by YOLOv3. This edge detection technique aids in further refining the lane boundaries, improving their clarity and continuity. To address the challenge of perspective distortion, inverse perspective mapping (IPM) is employed. IPM transforms the image into a bird's-eye view perspective, where parallel lane lines become approximately horizontal. This transformation allows for easier analysis and detection of lane boundaries. Finally, a sliding window approach is applied to estimate the precise lane markings. This technique involves dividing the IPM-transformed image into multiple vertical segments and iteratively searching for lane markings within each segment. The sliding window method ensures accurate lane detection, even in scenarios with curved or discontinuous lanes.

By combining the YOLOv3 algorithm, Canny edge detection, inverse perspective mapping, and sliding window approach, the proposed method offers a robust and efficient solution for lane detection. Experimental results demonstrate the effectiveness and accuracy of the proposed approach, making it suitable for real-time applications in autonomous vehicles and ADAS.

A Project Report

On

BREAST CANCER CLASSIFICATION AND IDENTIFICATION FROM HISTOPATHOLOGICAL IMAGES USING DEEP LEARNING MODEL

Submitted to

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In partial fulfilment of the completion of Eighth semester

Bachelor of Engineering

In

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Mr. Jayantkumar A Rathod **Associate Professor** **Project Guide**	**Dr. Sudheer Shetty** **Associate Professor** **HOD ISE**	**Dr. Peter Fe PRINCIPAL** **Alva's Institute of Engg. & Technology,** **Mijar. MOODBIDRI - 574 225, D.K**

Name of the Examiners **Signature with Date**

1. J. A Rathod — Jay 25/5/23
2. SUNIL KUMAR.S — S. e 25-5-23

ABSTRACT

Breast cancer plays a significant role in affecting female mortality. Researchers are actively seeking to develop early detection methods of breast cancer. Several technologies contributed to the reduction in mortality rate from this disease, but early detection contributes most to preventing disease spread, breast amputation and death.

Accurate detection and classification of breast cancer is a critical task in medical imaging due to the complexity of breast tissues. Due to automatic feature extraction ability, deep learning methods have been successfully applied in different areas, especially in the field of medical imaging. In this study, a novel patch-based deep learning method called Pa-DBN-BC is proposed to detect and classify breast cancer on histopathology images using the Deep Belief Network (DBN). Features are extracted through an unsupervised pre-training and supervised fine-tuning phase. The network automatically extracts features from image patches. Logistic regression is used to classify the patches from histopathology images.

Analysis of Histopathology images is an essential technique used for the detection process of breast cancer at an early stage. To enhance efficiency of BC i.e. Breast Cancer detection using histopathology images and also to reduce the burden from doctors, we design a deep learning methodology to diagnose cancer using medical images. Here in this paper, we use deep learning technology Convolutional Neural Network (CNN) for the recognition process.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A PROJECT REPORT ON

BLOCKCHAIN BASED VACCINATION RECORD TRACKING

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

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Name of the Examiners

1. SUNIL KUMAR.S
2. J. A. Rathod

Signature with Data

25-5-23

25/5/23

ABSTRACT

The efficient tracking and distribution of COVID-19 vaccines is critical to ensure that vaccines are effectively delivered from production to the end consumers. However, existing solutions often lack essential features such as decentralization, transparency, and security. To address this challenge, this project proposes a decentralized blockchain-based COVID-19 vaccine tracking solution that leverages the power of blockchain technology to enforce trust, accountability, and transparency. The proposed solution is built on the Ethereum blockchain, utilizing smart contracts for on-chain transactions. One key feature of this solution is the real-time update of location data with no delays, which helps protect privacy and ensure accurate tracking of the vaccine transportation path. By leveraging the decentralized nature of blockchain, the solution aims to eliminate single points of failure and reduce the risk of data manipulation or fraud, enhancing the security and integrity of the process.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A PROJECT REPORT ON

DETECTION OF PARKINSON'S DISEASE USING MACHINE LEARNING

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

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This is to certify that the project entitled **"Detection of Parkinson's Disease using Machine Learning"** has been successfully completed by

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Ms. LOLAKSHI P K **Assistant Professor** **Project Guide**	**Dr. SUDHEER SHETTY** **Professor** **HOD**	**Dr. PETER FERNANDES** **Principal** PRINCIPAL Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225, D.K

Name of the Examiners | **Signature with Date**

1. J-A-Rathod — 25/5/23
2. SUNIL KUMAR.S — 25-5-23

ABSTRACT

Parkinson's disease is an insidious neurological ailment that progressively undermines motor function and coordination, casting a dark shadow over the afflicted individual's quality of life. The timely detection of this debilitating condition assumes paramount importance, as it lays the foundation for efficacious symptom management and targeted treatment interventions. Characterized by telltale signs such as quivering tremors, rigid stiffness, and sluggish bradykinesia, the identification of Parkinson's disease becomes conceivable. In the realm of medical diagnostics, the realm of machine learning emerges as a powerful ally. Algorithms like Naive Bayes, Random Forest, and Logistic Regression manifest their prowess in discerning the presence of Parkinson's disease. By assimilating vast datasets consisting of labeled clinical attributes and corresponding Parkinson's disease status, these algorithms become well-versed in predicting the likelihood of a patient's affliction by analyzing freshly acquired data. Rigorous evaluation using dedicated testing sets can scrutinize the accuracy and performance of these computational models, ensuring their reliability and efficacy. The integration of machine learning algorithms within the medical domain holds immense promise in enabling physicians to proactively identify and diagnose Parkinson's disease in its nascent stages. This potential breakthrough has the potential to significantly augment patient outcomes, offering them a glimmer of hope amidst the pernicious grasp of this incapacitating disorder.