

# FACE SKETCH IMAGE COMPARISON USING SIAMESE NETWORK

PROJECT REPORT

Submitted By

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**Reg. No. CCAVMCS001**

For the award of the Degree of

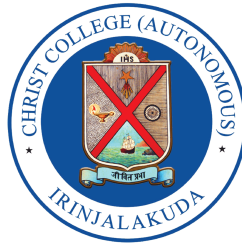
Master of Science

in Computer Science  
(University of Calicut)

*under the guidance of*

**Ms. Varsha Ganesh**

Assistant Professor



**M.Sc in COMPUTER SCIENCE  
DEPARTMENT OF COMPUTER SCIENCE  
CHRIST COLLEGE (AUTONOMOUS)  
IRINJALAKUDA, KERALA  
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*Certified that this thesis entitled "Face Sketch Image Comparison Using Siamese Network" submitted by "Adeeb P H(Reg. No. CCAVMCS001)" in partial fulfillment for the award of the degree of Master of Science in Computer Science under University of Calicut during the year 2021-2023, is the bonafide work carried out by him under my guidance and supervision.*

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Assistant Professor, CSE  
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Ms. Viji Viswanathan  
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**EXTERNAL EXAMINER**

**INTERNAL EXAMINER**

# Declaration

I hereby declare that the project entitled “**Face Sketch Image Comparison Using Siamese Network**” submitted to Calicut university, on partial fulfillment of the requirement for the award of degree in Master of Science in Computer Science is a record of original work done by me, under the guidance of Ms.Varsha Ganesh, Assistant Professor in Department of Computer Science, Christ College(Autonomous), Irinjalakuda.

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# ACKNOWLEDGMENT

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I would like to thank our principal Rev.Fr.Dr. Jolly Andrews CMI, for proper ambience to go on with the project. I take these opportunities to acknowledge my thanks to Ms Viji Viswanathan, Head of the Department of Computer Science for valuable guidance in developing this project. I' am also thankful to my Project Guide Ms Varsha Ganesh, and all other staff in Department of Computer Science for their immense support

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# Abstract

When there is no other evidence other than the sketch, which is made based on the memory of a victim or eyewitness, an automatic system that matches pictures of faces with the accompanying sketches can be extremely helpful in narrowing down potential suspects in criminal investigations. Yet, due to variances in how they are made, it is extremely difficult to match the design and photo. For example, the created drawing can have a propensity to accentuate particular face traits, making it challenging to locate a precise match with a photo. This is where the proposed system is more valuable.

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# DNA CRYPTOGRAPHY WITH STEGANOGRAPHY

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# Declaration

I hereby declare that the project entitled “**DNA Cryptography with Steganography**” submitted to Calicut university, on partial fulfillment of the requirement for the award of degree in Master of Science in Computer Science is a record of original work done by me, under the guidance of Ms.Priyanga K K, Assistant Professor in Department of Computer Science, Christ College(Autonomous), Irinjalakuda.

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# ACKNOWLEDGMENT

Submitting my project in the divine feet of Almighty God.I would like to take this opportunity to express my profound gratitude to all the people who have inspired and motivated to take this project success.

I would like to thank our principal Rev.Fr.Dr. Jolly Andrews CMI, for proper ambience to go on with the project. I take these opportunities to acknowledge my thanks to Ms Viji Viswanathan, Head of the Department of Computer Science for valuable guidance in developing this project. I am also thankful to my Project Guide Ms Priyanga K K, and all other staff in Department of Computer Science for their immense support

My sincere thanks to all those well wishers and friends who have helped me during the course of the project work and have been making it a great success. Last but not least, I wish to express my thankfulness to my family members for their excellent support and co-ordination.

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# Abstract

Protection of sensitive information from unauthorized access and threats are more important facts. Cloud computing is an emerging technology that provide storage of data become securable. Cryptography and Steganography area provides a wide range of possibilities on data security. In image steganography, the secret messages are embedded within a cover images and make a stegano image. No one can easily recognize the confidential data hiding inside the image. DNA cryptography is used to make data into amino acid sequences. AES cryptographic algorithm along with a secret key leads the security to next phase.

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# IDENTIFY THE RICE PLANT LEAF DISEASES BASED ON THE CORE SYMPTOM USING DECISION TREE WITH GINI IMPURITY ALGORITHM

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# Declaration

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# ACKNOWLEDGMENT

Submitting my project in the divine feet of Almighty God.I would like to take this opportunity to express my profound gratitude to all the people who have inspired and motivated to take this project success.

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## Abstract

Rice(*Oryza sativa*) is one of the most widely grown food crops in India. Rice is enrich with carbohydrate and good source of energy. Rice feeds further than 60 per cent population of India. Thus rice cultivation is veritably important in India. Nowadays, rice plant diseases are increasing due to current adverse weather and unpredictable natural calamities. As a result, growers in India are suffering a lot. The most three destructive rice plant diseases commonly seen in India are Bacterial leaf blight, Brown Spot and False Smut. The proposed system identifies the rice plant diseases based on core symptom from the set of symptoms using Decision tree with GINI impurity algorithm. If the main symptom of diseases affecting paddy crops is identified, farmers will be able to confirm the disease affecting the crop and then start immunization activities very soon. This will help the farmers to identify proper disease affected on their crops.

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**THAI WH-QUESTION  
CLASSIFICATION AND  
GENERATION WITH DEEP  
LEARNING FOR  
PART-OF-SPEECH TAGGING  
ENHANCEMENT TO  
NATURAL LANGUAGE  
PROCESSING**

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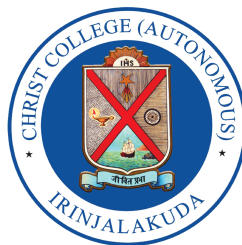
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**ANN MARY**

# Declaration

I hereby declare that the project entitled “**Thai wh-question classification and generation with deep learning for Part-of-Speech tagging enhancement to natural language processing**” submitted to Calicut university, on partial fulfillment of the requirement for the award of degree in Master of Science in computer Science is a record of original work done by me, under the guidance of Ms. Priyanga K.K, Assistant Professor in department of Computer Science, Christ College(Autonomous), Irinjalakuda.

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**EXTERNAL EXAMINER**

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# Abstract

For the selection of answers Classification of questions is a crucial task and it helps to define question sentences generated by extracting features from a sentence. Here, we have presented a methodology to improve question classification from texts using question generation, feature selection, and word embedding techniques. to assess the performance of the suggested methodology many experiments were performed using datasets TREC-6 dataset and Thai sentence dataset, with term frequency and combined term frequency and inverse frequency documents, including Unigram, Unigram + Bigram and Unigram + Trigram as features. Traditional based Machine learning models and deep learning classifiers were used. Multinomial Naive Bayes, Logistic Regression, and Support Vector Machine come under traditional classification models. Bidirectional Long Short-Term Memory (BiLSTM), Convolutional Neural Networks (CNN), and Hybrid model, which combined CNN and BiLSTM model were the deep learning methods used. The results from the experiment conveyed that to improve question classification accuracy our methodology based on Part-of- Speech (POS) tagging was the best. The classifying question orders achieved with average micro 1 -score of 0.98 when applied SVM model on adding all POS tags in the TREC-6 dataset. The loftiest average micro 1 -score achieved 0.8 when applied GloVe by using CNN model on adding concentrating tags in the Thai sentences dataset.

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# A DEEP LEARNING MODEL FOR RETINOBLASTOMA PREDICTION

PROJECT REPORT

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For the award of the Degree of

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*under the guidance of*

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# Declaration

I hereby declare that the project entitled “**A Deep Learning Model For Retinoblastoma Prediction** ” submitted to Calicut university, on partial fulfillment of the requirement for the award of degree in Master of Science in computer Science is a record of original work done by me, under the guidance of Ms.Vandana T V and Ms.Rasmi P M Assistant Professors in department of Computer Science, Christ College(Autonomous), Irinjalakuda.

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Submitting my project in the divine feet of Almighty God.I would like to take this opportunity to express my profound gratitude to all the people who have inspired and motivated to take this project success.

I would like to thank our principal Rev.Fr.Dr. Jolly Andrews CMI, for proper ambience to go on with the project. I take these opportunities to acknowledge my thanks to Ms Viji Viswanathan, Head of the Department of Computer Science for valuable guidance in developing this project. I am also thankful to my Project Guides Ms Vandana T V and Ms Rasmi P M, and all other staff in Department of Computer Science for their immense support

My sincere thanks to all those well wishers and friends who have helped me during the course of the project work and have been making it a great success. Last but not least, I wish to express my thankfulness to my family members for their excellent support and co-ordination.

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# Abstract

Retinoblastoma is a common ocular malignancy (Eye cancer).It gets developed in the eyes due to mutation in the RB1 gene.Retinoblastoma is also called leukocoria which develops from the immature cells of a retina.The proposed idea is to develop a early detection of eye cancer and its response to the treatment. Deep learning algorithms like Convolution Neural Network (CNN) can be used for classifying eye images to detect the presence or absence of Retinoblastoma. The proposed system applies pre-processing techniques such as enhacing the images and resizing to the fundus images of the eye for better results.Image processing techniques. The task of tumor detection can become aggravating by the problems which are present in almost all digital images.Thus the proposed system serves as a helping aid to health professionals to track the response of their treatment to such patients.

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# PHISHING WEBSITE DETECTION

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I would like to thank our principal Rev.Fr.Dr. Jolly Andrews CMI, for proper ambience to go on with the project. I take these opportunities to acknowledge my thanks to Ms Viji Viswanathan, Head of the Department of Computer Science for valuable guidance in developing this project. I am also thankful to my Project Guide Ms Soumya P S, and all other staff in Department of Computer Science for their immense support

My sincere thanks to all those well wishers and friends who have helped me during the course of the project work and have been making it a great success. Last but not least, I wish to express my thankfulness to my family members for their excellent support and co-ordination.

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# Abstract

One of the internet security problem is phishing sites that prey on human weaknesses rather than software bugs. It is called a procedure to trick online users into collecting their personal information such as identity and passwords. In this study, we introduce an intelligent method to detect fake websites. We use XGboost algorithm to train the machine which is one of the most relevant and efficient machine learning algorithm, In this project we added three features to detecting the phishing websites, which are Entropy of URL, URL encoding, Number of special characters along with that the methods like scaling and feature selection using Randomforest algorithm were also implemented all these methods will enhance the efficiency of our model



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# A DEEP GENERATIVE NEURAL NETWORK MODEL IN SPECTRAL IMAGE PROCESSING USING HYPERSPPECTRAL SAMPLES

PROJECT REPORT

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I would like to thank our principal Rev.Dr.Fr Jolly Andrews CMI, for proper ambience to go on with the project. I take these opportunities to acknowledge my thanks to Ms Viji Viswanathan, Head of the Department of Computer Science for valuable guidance in developing this project. I am also thankful to my Project Guide Ms Priyanga K K, and all other staff in Department of Computer Science for their immense support.

My sincere thanks to all those well wishers and friends who have helped me during the course of the project work and have been making it a great success. Last but not least, I wish to express my thankfulness to my family members for their excellent support and co-ordination.

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# Abstract

Spectral image processing using Hyperspectral samples is an artificial intelligence approach based on deep generative neural networks. A proof-of-concept project (POC) titled "A Deep Generative Neural Network Model In Spectral Image Processing Using Hyperspectral Samples" is aimed at detection of quality of fruits. The report outlines the precise objectives to be met by this project, including the suggestion of the best products based on their texture, illness and other environmental aspects. Processing of homogenous data is carried out early time that will leads to less accuracy and unidentified symptoms of fruits in some situations. As a solution for this is, multiple fruits were trained with the conventional neural network to detect the damaged fruits. DETR algorithm introduced by facebook has been used for object detection and three real data sets associated with fruit property production are used for this analysis. The report's conclusions are included in a web app portal that the industry can use and which internally aims to increase prediction accuracy.



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# SENTIMENT ANALYSIS USING VOICE DATA

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Submitting my project in the divine feet of Almighty God.I would like to take this opportunity to express my profound gratitude to all the people who have inspired and motivated to take this project success.

I would like to thank our principal Rev.Fr.Dr. Jolly Andrews CMI, for proper ambience to go on with the project. I take these opportunities to acknowledge my thanks to Ms Viji Viswanathan, Head of the Department of Computer Science for valuable guidance in developing this project. I' am also thankful to my Project Guide Ms Nisha Raveendran, and all other staff in Department of Computer Science for their immense support

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# Abstract

The past several years have seen a considerable increase in sentiment analysis. Textual sentiment analysis has been widely used and favoured by researchers. Here, we've first looked at the methods that different researchers have put forth for sentiment analysis across all data modalities. We then attempted putting some of those strategies into practise. We have discussed audio data in addition to text sentiment analysis in this essay. Research is still being done in the area of audio sentiment analysis, therefore new methods are being used to examine audio data. And also give the remedies respect with the each emotion.

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# CARDAMOM PLANT DISEASE DETECTION USING INCEPTION V3

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Master of Science

in Computer Science  
(University of Calicut)

*under the guidance of*

**Ms. Viji Viswanathan**

Assistant Professor



**M.Sc in COMPUTER SCIENCE  
DEPARTMENT OF COMPUTER SCIENCE  
CHRIST COLLEGE (AUTONOMOUS)  
IRINJALAKUDA, KERALA  
2021-2023**

**DEPARTMENT OF COMPUTER SCIENCE**

**Christ College(Autonomous)**

**Irinjalakuda**



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*Certified that this thesis entitled "Cardamom plant disease detection using inception v3" submitted by "Jismaria Paul(Reg. No. CCAVMCS007)" in partial fulfillment for the award of the degree of Master of Science in Computer Science under University of Calicut during the year 2021-2023, is the bonafide work carried out by her under my guidance and supervision.*

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**EXTERNAL EXAMINER**

**INTERNAL EXAMINER**

# Declaration

I hereby declare that the project entitled “**Cardamom Plant Disease Detection Using Inception V3** ” submitted to Calicut university, on partial fulfillment of the requirement for the award of degree in Master of Science in computer Science is a record of original work done by me, under the guidance of Ms.Viji Viswanathan, Assistant Professor in department of Computer Science, Christ College(Autonomous), Irinjalakuda.

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# ACKNOWLEDGMENT

Submitting my project in the divine feet of Almighty God.I would like to take this opportunity to express my profound gratitude to all the people who have inspired and motivated to take this project success.

I would like to thank our principal Rev.Dr. Jolly Andrews CMI, for proper ambience to go on with the project. I take these opportunities to acknowledge my thanks to Ms Viji Viswanathan, Head of the Department of Computer Science and my Project Guide and all other staff in Department of Computer Science for their immense support

My sincere thanks to all those well wishers and friends who have helped me during the course of the project work and have been making it a great success. Last but not least, I wish to express my thankfulness to my family members for their excellent support and co-ordination.

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**JISMARIA PAUL**

# Abstract

Cardamom is the spice queen. In India ranks third in cardamom production. Plant diseases have a disastrous impact on food production safety; they reduce the eminence and viability of crops. The number of agricultural products. In severe cases, plant diseases can result in significant losses or no harvest. Various diseases and pests have an impact on the growth and crop yields of cardamom plants at various stages. This study focused on cardamom plant diseases, as well as three stages of diseases, healthy, mosaic, and nematode. Several methods for detecting plant diseases have been proposed, with deep learning emerging as the most promising. This study indicates a method for detecting cardamom plant diseases using the Inception v2 model. The experimental findings has 90 percentage accuracy revealed.

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# AN ACCURACY PREDICTION OF AIR QUALITY INDEX [AQI] BASED ON MULTIVARIATE TIME SERIES USING LSTM DEEP LEARNING MODEL

PROJECT REPORT

Submitted By

**ROSMI T.B**

Reg. No. CCAVMCS010

For the award of the Degree of

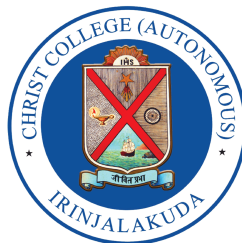
Master of Science

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DEPARTMENT OF COMPUTER SCIENCE  
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# Declaration

I hereby declare that the project entitled “**An Accuracy Prediction of Air Quality Index [AQI] based on Multivariate Time Series using LSTM Deep Learning Model**” submitted to Calicut university, on partial fulfillment of the requirement for the award of degree in Master of Science in computer Science is a record of original work done by me, under the guidance of Ms.Sini Thomas, Assistant Professor in department of Computer Science, Christ College(Autonomous), Irinjalakuda.

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Submitting my project in the divine feet of Almighty God.I would like to take this opportunity to express my profound gratitude to all the people who have inspired and motivated to take this project success.

I would like to thank our principal Rev.Dr. Jolly Andrews CMI, for proper ambience to go on with the project. I take these opportunities to acknowledge my thanks to Ms Viji Viswanathan, Head of the Department of Computer Science for valuable guidance in developing this project. I am also thankful to my Project Guide Ms Sini Thomas, and all other staff in Department of Computer Science for their immense support.

My sincere thanks to all those well wishers and friends who have helped me during the course of the project work and have been making it a great success. Last but not least, I wish to express my thankfulness to my family members for their excellent support and co-ordination.

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**ROSMI T.B**

# Abstract

An immense growth of modern technology has made huge influences on the human life. In modern life style, people are very pleasant and become easy with all technologies. But the important thing is that modern human life is fully surrounds with pollution problems. Atmospheric pollution increases day by day in modern cities and also in rural areas. If air pollution can be monitored and credited in advance, it will be a huge boon to the health sector. The presence of air pollutant PM2.5(Particulate matter), PM10, SO<sub>2</sub> (Sulphur dioxide), CO(Carbon Monoxide),O<sub>3</sub> (Ozone), NO<sub>2</sub>(Nitrogen dioxide),and NH<sub>3</sub>(Ammonia) in the atmosphere that are harmful to the human health and other living beings, or cause damage to the climate or to materials. There are several IOT based mechanisms used to detect and predict the air pollutants. Air Quality Index (AQI) is an index for reporting air quality. AQI informs the public about the quality of air and the risk associated with it. In proposed method, calculate AQI based on Chemical pollutants using Machine Learning Concept. And also uses a multivariate time series Long Short Term Memory-LSTM (Artificial Recurrent Neural Network architecture) model to predict the AQI of air pollutant. The model gives the accurate prediction of AQI using the trained dataset. Such predictions are very useful to human to get awareness and take care of their health.

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# PIXEL COMBINATION WITH VISUAL CRYPTOGRAPHY

PROJECT REPORT

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I hereby declare that the project entitled “**Pixel Combination With Visual Cryptography**” submitted to Calicut university, on partial fulfillment of the requirement for the award of degree in Master of Science in Computer Science is a record of original work done by me, under the guidance of Ms.Priyanga K K, Assistant Professor in Department of Computer Science, Christ College(Autonomous), Irinjalakuda.

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# ACKNOWLEDGMENT

Submitting my project in the divine feet of Almighty God.I would like to take this opportunity to express my profound gratitude to all the people who have inspired and motivated to take this project success.

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# Abstract

To send information without losing the data is difficult. Thus encryption and decryption method has invented. Cryptography is a method used for hiding the information from the outsiders. Visual cryptography is a method depends upon the pictorial representation of information. No one can easily recognize the confidential data hiding inside the image. The main aim of the project is to protect the information. For this we use pixel combination to represent each letter or number and also we provide private keys to protect them.

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