**SUMMARY OF THESIS PAPER**

**(Which we have study.)**

**TEAM MEMBER:**

**Name: Dev Shingha**

**ID: 2019100000026**

**Email:** [**2019100000026@seu.edu.bd**](mailto:2019100000026@seu.edu.bd)

**Batch: 52**

**Name: Zahid Hasan**

**ID: 2019100000015**

**Email:** [**2019100000015@seu.edu.bd**](mailto:2019100000015@seu.edu.bd)

**Batch: 52**

**Name: Sampa Akter**

**ID: 2019000000025**

**Email:** [**2019000000025@seu.edu.bd**](mailto:2019000000025@seu.edu.bd)

**Batch: 51**

**SUBMITTED TO**

**Ms. Maksuda Rabeya**

**Lecturer, Southeast University**

|  |  |
| --- | --- |
| Serial No | 1 |
| Title | Machine vision-based papaya disease recognition. |
| Published | 1 March 2020 |
| Algorithm Used | K-means clustering algorithm. |
| Accuracy | 90% |
| URL | https://www.sciencedirect.com/science/article/pii/S1319157818302404 |
| Summary | |
| This paper describes methods for diagnosing papaya diseases using machine learning approach. In this work, they have dealt with “Five” diseases namely black spot, powdery mildew, brown spot, phytophthora blight and anthracnose, which frequently occur all over Bangladesh. K-means clustering algorithm, decision tree, naive Bayes algorithm are used for experimentally evaluated classifiers. Here, K-means clustering algorithm is used for solving the problems. More than 90% of classification accuracy has been achieved in this mentioned paper. | |

|  |  |
| --- | --- |
| Serial No | 2 |
| Title | Rice Leaf Disease Detection Using Machine Learning Techniques. |
| Published | 24-25 December 2019 |
| Algorithm Used | Decision Tree. |
| Accuracy | 97% |
| URL | https://www.researchgate.net/profile/Sifat-Momen/publication/340690498\_Rice\_Leaf\_Disease\_Detection\_Using\_Machine\_Learning\_Techniques/links/5eae855a299bf18b95910958/Rice-Leaf-Disease-Detection-Using-Machine-Learning-Techniques.pdf |
| Summary | |
| This paper presents a rice leaf disease detection system using machine learning approaches. Three of the most common rice plant diseases namely leaf smut, bacterial leaf blight and brown spot diseases are detected in this work. Different machine learning algorithms including that of KNN (K-Nearest Neighbor), J48(Decision Tree), Naive Bayes and Logistic Regression used there. It was found that decision tree performed the best with 97.9167% accuracy on test data. | |

|  |  |
| --- | --- |
| Serial No | 3 |
| Title | Predicting and Staging Chronic Kidney Disease of Diabetes (Type-2) Patient Using Machine Learning Algorithms. |
| Published | 2 October2019 |
| Algorithm Used | IBK |
| Accuracy | 98% |
| URL | https://scholar.google.com/citations?view\_op=view\_citation&hl=en&user=m7sMqQQAAAAJ&citation\_for\_view=m7sMqQQAAAAJ:W7OEmFMy1HYC |
| Summary | |
| This paper describes methods for Predicting and Staging Chronic Kidney Disease of Diabetes (Type-2) Patient Using Machine Learning  Algorithms. Around 10 to 40 percent of those with Type 2 (grown-up beginning) diabetes in the end will experience the negative impacts of kidney damage. In this paper, we have presented a comparative analysis based on the performance of five different algorithms-Naive Bayes (NB), In-stance Based Learning (IBK), Random Forest (RF), Decision Stump (DS) and Decision Tree (J48) for predicting CKD of diabetes patients only by urine test. Among all the algorithms the IBK gives the best result. | |
| Serial No | 4 |
| Title | Skin Disease Recognition: A Machine Vision Based Approach. |
| Published | 19 March 2021 |
| Algorithm Used | K-means clustering algorithm. |
| Accuracy | 95% |
| URL | https://ieeexplore.ieee.org/abstract/document/9441980 |
| Summary | |
| A total of eight different skin diseases could be detected through this  research which are Acne Vulgaris, Bullous Disease, Drug Eruption,  Eczema, Fungal Infection, Impetigo, Skin TB, and Viral Disease. In this way, defective parts are isolated from healthy regions, clustering algorithm on various defects alongside ground truth. This method efficiently recognizes eight different skin diseases with an accuracy rate of percentage is 94.79%. | |

|  |  |
| --- | --- |
| Serial No | 5 |
| Title | Prediction of Coronary Heart Disease using Machine Learning: An Experimental Analysis. |
| Published | July 2019 |
| Algorithm Used | Naïve Bayes. |
| Accuracy | 63% |
| URL | https://www.researchgate.net/publication/335094208\_Prediction\_of\_Coronary\_Heart\_Disease\_using\_Machine\_Learning\_An\_Experimental\_Analysis |
| Summary | |
| This paper describes methods for Prediction of Coronary Heart Disease using Machine Learning. In this work, they have deal, systolic blood pressure, cumulative tobacco in kg (tobacco), bad cholesterol also known as low density lipoprotein cholesterol, adiposity, family history of heart disease. Using three supervised learning techniques namely Naïve Bayes (NB), Support Vector Machine (SVM) and Decision Tree (DT), to discover correlations in CHD data that might help improving the prediction rate. The final model NB is a more sensitive model at 63% as compared to the other models under consideration. | |

|  |  |
| --- | --- |
| Serial No | 6 |
| Title | Computer Vision Based Local Fruit Recognition. |
| Published | October 2019 |
| Algorithm Used | Support Vector Machines (SVMs). |
| Accuracy | 95% |
| URL | https://scholar.google.com/citations?view\_op=view\_citation&hl=en&user=m7sMqQQAAAAJ&citation\_for\_view=m7sMqQQAAAAJ:qjMakFHDy7sC |
| Summary | |
| This paper describes computer vision-based approach for fruit recognition and specially for local fruit. In this work, they have dealt with six rare local fruits namely Amloki, Sugar-apple, Bilombo, Elephant-apple, Orboroi and Sapota. K-means clustering algorithm, decision tree, naive Bayes algorithm are used for experimentally evaluated classifiers. Here, SVMs is used for solving the problems. More than 95% of classification accuracy has been achieved in this mentioned paper. | |

|  |  |
| --- | --- |
| Serial No | 7 |
| Title | A Comparative Study of Classifiers in the Context of Papaya Disease Recognition. |
| Published | 4 July 2019 |
| Algorithm Used | Support Vector Machines (SVMs). |
| Accuracy | 95% |
| URL | https://scholar.google.com/citations?view\_op=view\_citation&hl=en&user=m7sMqQQAAAAJ&citation\_for\_view=m7sMqQQAAAAJ:d1gkVwhDpl0C |
| Summary | |
| This paper about Papaya disease recognition using machine learning approach. In this paper Support Vector Machines, C4.5, Naive Bayes, logistic regression, KNN, random forest, neural network, backpropagation algorithm used here for recognized papaya disease. SVM outperforms all other classifiers 95% accuracy where KNN performs worst showing 71.11% accuracy only. | |

|  |  |
| --- | --- |
| Serial No | 8 |
| Title | Cauliflower Disease Recognition Using Machine Learning and Transfer Learning. |
| Published | 4 September 2021 |
| Algorithm Used | CNN. |
| Accuracy | 90% |
| URL | https://scholar.google.com/citations?view\_op=view\_citation&hl=en&user=m7sMqQQAAAAJ&citation\_for\_view=m7sMqQQAAAAJ:Zph67rFs4hoC |
| Summary | |
| This paper about recognize diseases occur on plants in Cauliflower and increase production effectively. In this paper Random forest, CNN (inception V3, V2, VGG16) algorithm are used here for recognized cauliflower disease. But CNN achieves 90.08% accuracy and its achieved highest accuracy than other. | |

|  |  |
| --- | --- |
| Serial No | 9 |
| Title | Rose Diseases Recognition using MobileNet. |
| Published | October 2020 |
| Algorithm Used | MobileNet Learning Algorithm. |
| Accuracy | 95% |
| URL | https://www.researchgate.net/publication/347035630\_Rose\_Diseases\_Recognition\_using\_MobileNet |
| Summary | |
| In this work, they have deal with 1600 data image used to train the model and 400 data images used to test the model accurately. Transfer learning algorithm are used here for recognized rose disease. MobileNet learning technique achieved 95.63% accuracy and its highest than any other algorithm. Allover,95% accuracy has been achieved in this mentioned paper. | |

|  |  |
| --- | --- |
| Serial No | 10 |
| Title | Automated Cucumber disease recognition. |
| Published | 14 November 2021 |
| Algorithm Used | Vector Support Machines (SVMs). |
| Accuracy | 94% |
| URL | https://link.springer.com/chapter/10.1007/978-981-16-2641-8\_52 |
| Summary | |
| In this work, they have deal with Threat due to various plant diseases. Cucumber diseases one of them. Pattern recognition, data clustering algorithm and support vector machines are used here to find Automated cucumber disease. SVMs algorithm achieve 94.02% accuracy than any other algorithm. | |