

**Academic Year: 2020-21****Best Projects (U.G)**

S.No.	Name of the Student(s)	Project Title	Areas of Specialization	Type	Contribution/Achievement/ Research Output	Matching with the stated POs and PSOs
1	Sh. Vahida - 17A81A0542 K.K.R. Maruthi - 17A81A0519 T. Sai Jahnvi - 16A81A0547 V. Lakshmi Narayana - 16A81A0554 Project Supervisor Mr.M.S. Kumar Reddy	Credit card Fraud Detection using Machine Learning and Ant Colony Optimization	Machine Learning	Application	Due to the growth in cyber-attacks and data theft in recent days, credit card fraud detection is of great importance to financial institutions. The Proposed System, ant colony optimization with machine learning algorithms is proposed to create a wrapper that gives better performance than a simple machine learning model by removing unnecessary and redundant features.	PO(1,2,3,4,5,9,10,11,12) PSO(1,2)
2	K.Devisaidurga - 17A81A0579 S.Tejasri - 17A81A05A2 M.Ambika - 17A81A0584 E.Anusha - 17A81A0564 Project Supervisor Dr.V. Venkateswara Rao	Key Generation from Behavioural Patterns using Smart Phones	Cryptography	Application	This project aims to create an Android application to generate cryptographic keys using user-specific behavioural patterns. The behavioural patterns are recorded through sensors on the Android device, and the keys are generated when required by processing the recorded data from recent periods. This is done by applying the k-means++ algorithm to classify the data, after which it can be discretized into voxels on which we will perform statistical analysis.	PO(1,2,3,4,5,9,10,11,12) PSO(1,2)

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Mission: To utilize innovative learning methods for academic improvement.

To encourage higher studies and research to meet the futuristic requirements of Computer Science and Engineering.

To inculcate Ethics and Human values for developing students with good character.



SRI VASAVI ENGINEERING COLLEGE (AUTONOMOUS)

PEDATADEPALLI, TADEPALLIGUDEM-534 101

Department of Computer Science & Engineering (Accredited by NBA)

S.No.	Name of the Student(s)	Project Title	Areas of Specialization	Type	Contribution/Achievement/Research Output	Matching with the stated POs and PSOs
3	D.Deepika N R - 17A81A05C5 Y.Yamini V - 17MU1A0532) B.Rohini K - 17A81A05B7 S.K Nagesh Babu - 17A81A05F5 Project Supervisor Dr.G. Loshma	Facial Expression Recognition using Convolutional Neural Networks	Deep Learning	Application	CNNs can be thought of automatic feature extractors from the image. While if we use an algorithm with pixel vector we lose a lot of spatial interaction between pixels, a CNN effectively uses adjacent pixel information to effectively down sample the image first by convolution and then uses a prediction layer at the end. Accuracy is the performance metrics based on which we are designing the possible accurate model.	PO(1,2,3,4,5,9,10,11,12) PSO(1,2)
4	M. Sri Chandana - 17A81A05J8 I.Chaitanya - 17A81A05I4 G.S.V.S Sampath - 17A85A0502 V.Badrinath - 17A81A05L5 Project Supervisor Dr.P. Laksmikanth	Smart Agriculture using IOT	IOT	Application	Agriculture is an integral part of Indian economy. Smart agriculture increases the crop yield, decreases water wastage and imbalanced use of fertilizers. The highlighting feature of this project is that it measures the different agricultural parameters affecting the yield . Secondly this system also contains an android mobile app providing an easy access of information to the farmer. Moreover this project presents a smart irrigation system that optimizes water usage.	PO(1,2,3,4,5,9,10,11,12) PSO(1,2)

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18 Phishing Results

Algorithm	N	Nfs	%FS*	S*	Sfs*	Ds*	PT*	PTfs*	DFt*
LogisticRegression	32	3.5	6.25	93%	99%	+7%	3.592	0.402	-3.19
XGBoost	32	3	9.37	91%	97%	+7%	3.248	1.325	-1.96
K-NearestNeighbours	32	5	15.6	93%	98%	+6%	4.063	2.114	-1.95

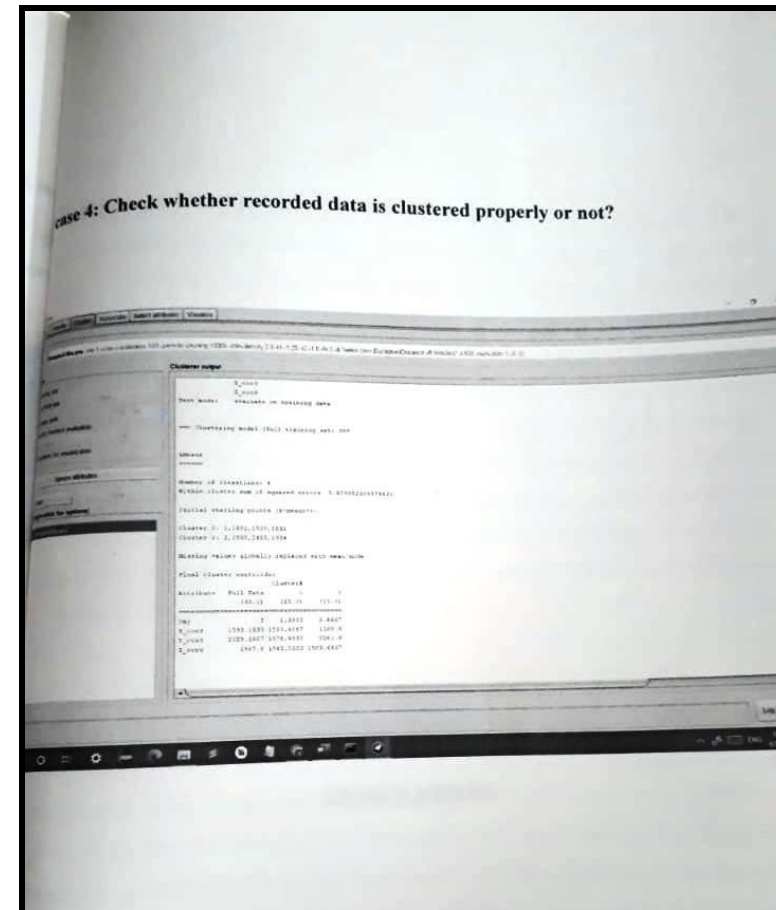
* : Average of ten Runs
 N : Number of Features in the Actual Dataset
 Nfs : Number of Features selected by ACO Wrapper
 %FS : Percentage of Features selected by ACO Wrapper
 S : Specificity of the prediction model built using all features
 Sfs : Specificity of the prediction model built using features selected
 Ds : Difference in Specificity with full and reduced feature set
 PT : Time taken by the prediction process on test data with all features
 PTfs : Time taken by the prediction process on test data with selected features
 DFt : Difference in time taken by prediction process on test data with all and selected Features

19 Creditcard Results

Algorithm	N	Nfs	%FS*	S*	Sfs*	Ds*	PT*	PTfs*	DFt*
LogisticRegression	29	5	17.2	94%	96%	+2%	3.067	1.266	-2.34
XGBoost	29	8	27.5	76%	87%	+11%	6.915	1.739	-5.176
K-NearestNeighbours	29	12	41.3	75%	91%	+16%	2.679	1.213	-1.466

* : Average of ten Runs
 N : Number of Features in the Actual Dataset
 Nfs : Number of Features selected by ACO Wrapper
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Credit card Fraud Detection using Machine Learning and Ant Colony Optimization



Key Generation from Behavioural Patterns using Smart Phones

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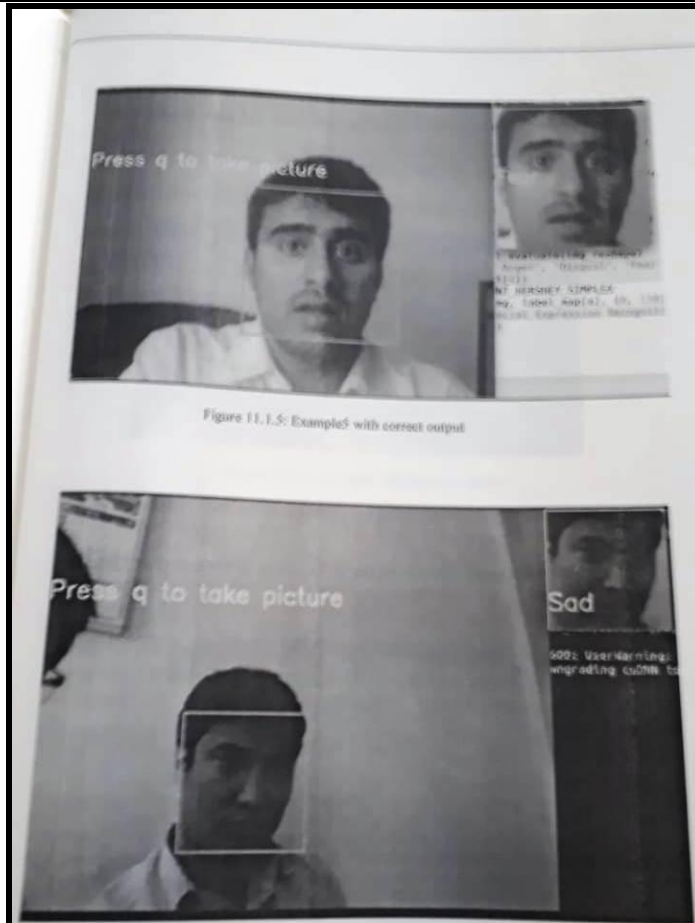



Figure 11.1.5: Examples with correct output

Facial Expression Recognition using Convolutional Neural Networks



Figure 4.3: Readings on the Blynk app

Smart Agriculture using IOT


Head of the Department
Head of the Department
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