ML PROJECT

TRANSPORT DATA ANALYSIS

Abstract

[Draw your reader in with an engaging abstract. It is typically a short summary of the document. When you're ready to add your content, just click here and start typing.]

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Problem 1

Problem Statement:

You work for an office transport company. You are in discussions with ABC Consulting company for providing transport for their employees. For this purpose, you are tasked with understanding how do the employees of ABC Consulting prefer to commute presently (between home and office). Based on the parameters like age, salary, work experience etc. given in the data set 'Transport.csv', you are required to predict the preferred mode of transport. The project requires you to build several Machine Learning models and compare them so that the model can be finalized.

Data Dictionary

Age: Age of the Employee in Years

Gender: Gender of the Employee

Engineer: For Engineer = 1, Non Engineer = 0

MBA: For MBA = 1, Non MBA = 0

Work Exp : Experience in years

Salary: Salary in Lakhs per Annum

Distance: Distance in Kms from Home to Office

license: If Employee has Driving License -1, If not, then 0

Transport : Mode of Transport

Objectives:

The objective is to build various Machine Learning models on this data set and based on the accuracy metrics decide which model is to be finalized for finally predicting the mode of transport chosen by the employee.

1.1Basic data summary, Univariate, Bivariate analysis, graphs, checking correlations, outliers and missing values treatment (if necessary) and check the basic descriptive statistics of the dataset.

Loading packages and dataset,

Data sample or data head

	Age	Gender	Engineer	MBA	Work Exp	Salary	Distance	license	Transport
0	28	Male	0	0	4	14.3	3.2	0	Public Transport
1	23	Female	1	0	4	8.3	3.3	0	Public Transport
2	29	Male	1	0	7	13.4	4.1	0	Public Transport
3	28	Female	1	1	5	13.4	4.5	0	Public Transport
4	27	Male	1	0	4	13.4	4.6	0	Public Transport

Checking data info of data:

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 444 entries, 0 to 443
Data columns (total 9 columns):
# Column Non-Null Count Dtype
0 Age 444 non-null
1 Gender 444 non-null
2 Engineer 444 non-null
                                   int64
                                    object
                                    int64
                 444 non-null
                                    int64
 4 Work Exp 444 non-null int64
5 Salary 444 non-null
6 Distance 444 non-null
                                   float64
                                   float64
 7 license 444 non-null int64
8 Transport 444 non-null object
                                   object
dtypes: float64(2), int64(5), object(2)
memory usage: 31.3+ KB
```

Observation:

dataset contain 444 entries and 9 columns.

Null value is not present in dataset

dtypes: float64(2), int64(5), object(2)

memory usage: 31.3+ KB

Describing dataset:

	count	mean	std	min	25%	50%	75%	max
Age	444.0	27.747748	4.416710	18.0	25.0	27.0	30.000	43.0
Engineer	444.0	0.754505	0.430866	0.0	1.0	1.0	1.000	1.0
MBA	444.0	0.252252	0.434795	0.0	0.0	0.0	1.000	1.0
Work Exp	444.0	6.299550	5.112098	0.0	3.0	5.0	8.000	24.0
Salary	444.0	16.238739	10.453851	6.5	9.8	13.6	15.725	57.0
Distance	444.0	11.323198	3.606149	3.2	8.8	11.0	13.425	23.4
license	444.0	0.234234	0.423997	0.0	0.0	0.0	0.000	1.0

The employee who are using transport average age is 28 years, minimum age is 18 and maximum age is 43 year

Employee who are using transport having work experience average is 6 year, and minimum

Fresher using less transport, employee who have work exp 24 are using transport facility more.

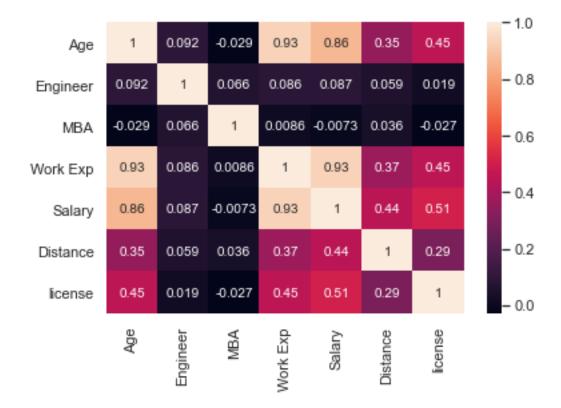
Employee using transport having average salary 16lpa.

Average distance travelled by employee is 11km.

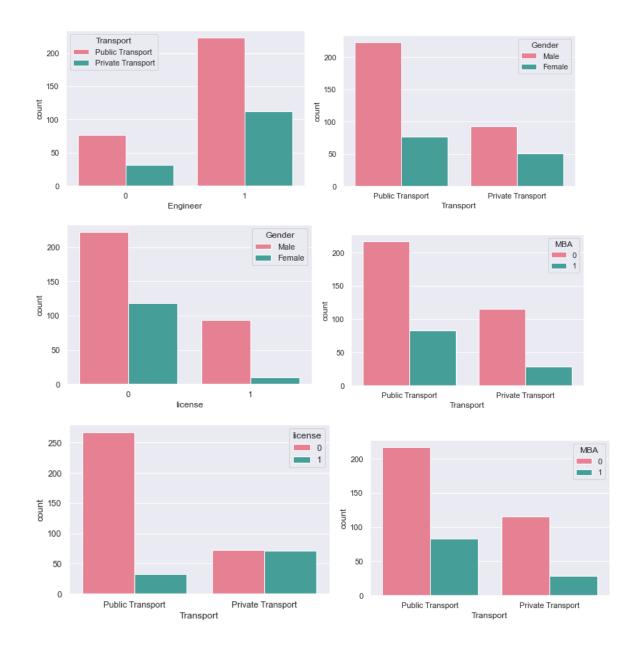
Maximum employee have driving license.

Checking Correlation:

	Age	Engineer	MBA	Work Exp	Salary	Distance	license
Age	1.000000	0.091935	-0.029090	0.932236	0.860673	0.352872	0.452311
Engineer	0.091935	1.000000	0.066218	0.085729	0.086762	0.059316	0.018924
MBA	-0.029090	0.066218	1.000000	0.008582	-0.007270	0.036427	-0.027358
Work Exp	0.932236	0.085729	0.008582	1.000000	0.931974	0.372735	0.452867
Salary	0.860673	0.086762	-0.007270	0.931974	1.000000	0.442359	0.508095
Distance	0.352872	0.059316	0.036427	0.372735	0.442359	1.000000	0.290084
license	0.452311	0.018924	-0.027358	0.452867	0.508095	0.290084	1.000000



As we can see, there is a very high positive correlation between Work Exp. and Age as well as Work Exp. and Salary. The same shall be dealt later on.

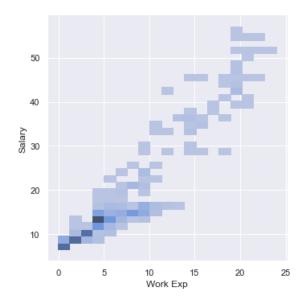


Engineer employee using public transport more

Male employee uses public transport more.

Most of Male employee do not have licenses, they are using public transport.

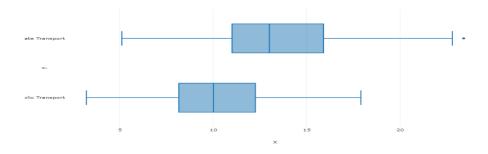
Employee having MBA uses the public transport, and they have no license.



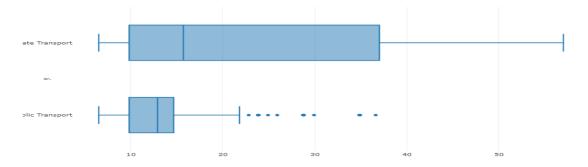
Employee having less exp , earning less. Salary increases as experience increases.

#Box Plot

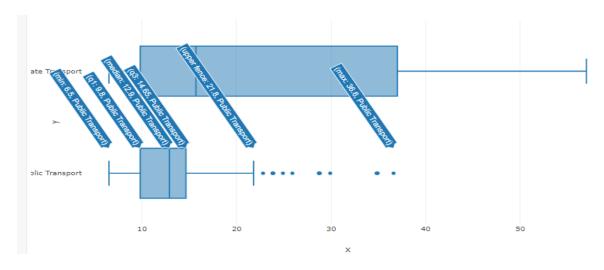
Distance



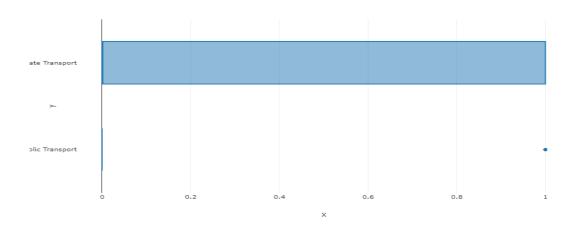
SALARY



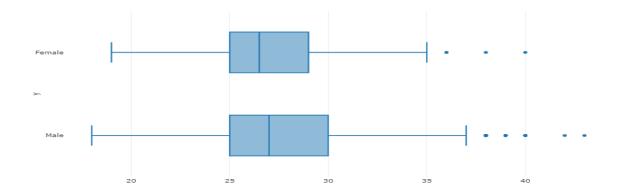
license

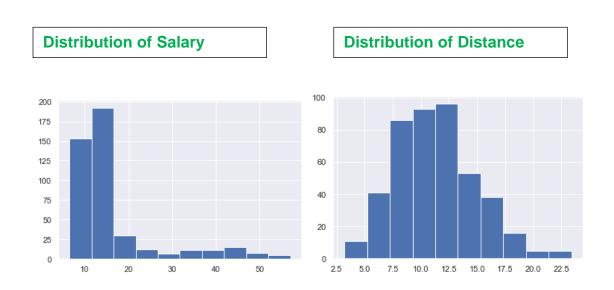


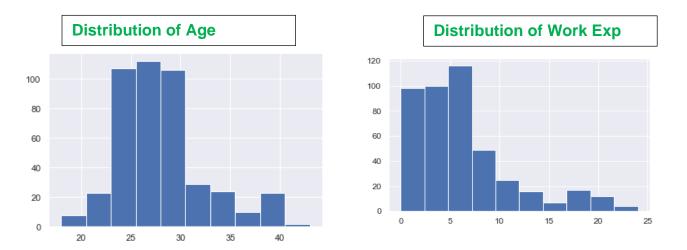
Work EXP:



AGE:







converting objective into categorical values.

	Age	Gender	Engineer	MBA	Work Exp	Salary	Distance	license	Transport
0	28	1	0	0	4	14.3	3.2	0	1
1	23	0	1	0	4	8.3	3.3	0	1
2	29	1	1	0	7	13.4	4.1	0	1
3	28	0	1	1	5	13.4	4.5	0	1
4	27	1	1	0	4	13.4	4.6	0	1
5	26	1	1	0	4	12.3	4.8	1	1
6	28	1	1	0	5	14.4	5.1	0	0
7	26	0	1	0	3	10.5	5.1	0	1
8	22	1	1	0	1	7.5	5.1	0	1
9	27	1	1	0	4	13.5	5.2	0	1
10	25	0	1	0	4	11.5	5.2	0	1
11	27	1	1	0	4	13.5	5.3	1	1
12	24	1	1	0	2	8.5	5.4	0	1
13	27	1	1	0	4	13.4	5.5	1	1
14	32	1	1	0	9	15.5	5.5	0	1

Outlier Code format for capturing outliers for numeric variables: $IQRAge = IQR(cars_numeric\$Age)$ LLAge = quantile(cars_numeric\$Age, 0.25) - 1.5*IQRAge ULAge = quantile(cars_numeric\$Age, 0.75) + 1.5*IQRAge AgeOut = subset(cars_numeric, cars_numeric\$Age < LLAge | cars_numeric\$Age > ULAge) dim(AgeOut)

Based upon that, below is the count of outliers, variable-vise.

- Age- 25
- Work exp. − 38
- Salary 59
- Distance –9

1.2Split the data into train and test in the ratio 70:30. Is scaling necessary or not?

 $X_{train}, X_{test}, y_{train}, y_{test} = train_{test}(X, y, test_{size}=0.30, random_{state}=1)$

convert the features into z scores as we do not know what units / scales were used and store them in new dataframe # It is always adviced to scale numeric attributes in models that calculate distances.

b)Splitting the data into train and test

Copy all the predictor variables into X dataframe. Since 'Transport' is dependent variable drop it # Copy the 'Transport' column alone into the y dataframe. This is the dependent variable. #Let us break the X and y dataframe into training set and test set. For this we will use #Sklearn package's data splitting function which is based on random function and # Split X and y into training and test set in 70:30 ratio.

1.3 Build the following models on the 70% training data and check the performance of these models on the Training as well as the 30% Test data using the various inferences from the Confusion Matrix and plotting a AUC-ROC curve along with the AUC values. Tune the models wherever required for optimum performance.: a. Logistic Regression Model.

#LOGISTIC REGRESSION

LogisticRegression(max_iter=10000, n_jobs=2, penalty='none', solver='newton-cg', verbose=True)

0.7870967741935484

[[58 44] [22 186]]

	precision	recall	f1-score	support
0	0.72	0.57	0.64	102
1	0.81	0.89	0.85	208
accuracy			0.79	310
macro avg	0.77	0.73	0.74	310
weighted avg	0.78	0.79	0.78	310

Accurancy of train and test dataset is 78%

Solver: solver is the algorithm to use in the optimization problem. The different types of solvers available are newton-cg, lbfgs, liblinear, sag and saga where lbfgs is the default one. To choose a solver, you might want to consider the following aspects:

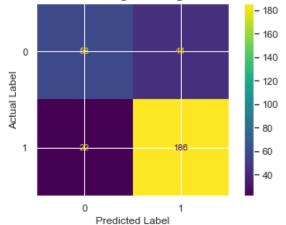
- ➤ For small datasets, 'liblinear' is a good choice, whereas 'sag' and 'saga' are faster for large ones;
- ➤ For multiclass problems, only 'newton-cg', 'sag', 'saga' and 'lbfgs' handle multinomial loss;
- ➤ 'liblinear' is limited to one-versus-rest schemes. Since we are dealing with multi class problem in this dataset where our target variable 'vote' is having two classes, we choose solver to be newton-cg. max_iter:

Maximum number of iterations taken for the solvers to converge. Default is 100, but here 10000 is given for better accuracy and more learning by the algorithm.

penalty: Penalized logistic regression imposes a penalty to the logistic model for having too many variables.

This results in shrinking the coefficients of the less contributive variables towards zero. This is also known as regularization. The various values given for penalty parameter are none, I2, I1, elasticnet out of which I2 is the default choice..

Confusion Matrix for Logistic Regression train data

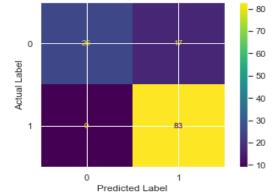


	0	1
0	0.058538	0.941464
1	0.259928	0.740072
2	0.235071	0.764929
3	0.136701	0.863299
4	0.169100	0.830900

37313			
precision	recall	f1-score	support
0.74	0.60	0.66	42
0.83	0.90	0.86	92
		0.81	134
0.78	0.75	0.76	134
0.80	0.81	0.80	134
	0.74 0.83 0.78	precision recall 0.74 0.60 0.83 0.90 0.78 0.75	precision recall f1-score 0.74 0.60 0.66 0.83 0.90 0.86 0.81 0.78 0.75 0.76

accuracy of test dataset: 0.8059701492537313



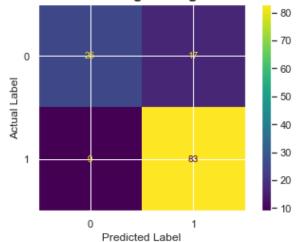


Confusion matrix for the test data

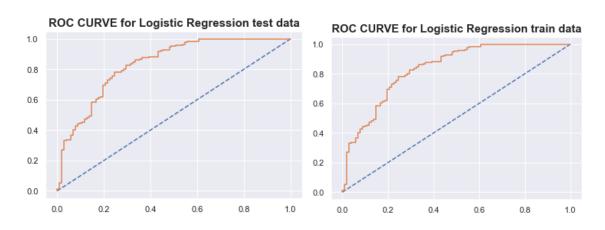
[[25 17]

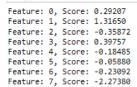
[9 83]]

Confusion Matrix for Logistic regression test data



	0	1
0	0.623812	0.376188
1	0.056026	0.943974
2	0.465471	0.534529
3	0.036025	0.963975
4	0.483742	0.516258







View the Intercept and Coefficents:

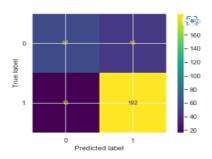
```
-0.23092221 -2.27380297]]
[-2.72495198]
  features
              coef
   Age 0.292071
Gender 1.316497
2 Engineer -0.358723
      MBA 0.397569
4 Work Exp -0.184850
   Salary -0.058797
6 Distance -0.230922
  license -2.273803
           coef
  Gender 3.730330
   MBA 1.488202
   Age 1.339198
  Salary 0.942899
Work Exp 0.831229
 Distance 0.793801
 Engineer 0.698568
  license 0.102920
```

##Applying Grid Search on Logistic Regression model

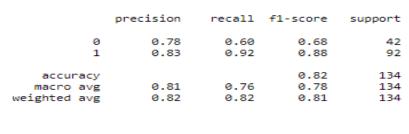
LogisticRegression(max_iter=10000, n_jobs=2, penalty='none', solver='sag')

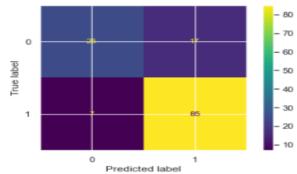
	0	1
0	0.533557	0.468443
1	0.082171	0.937829
2	0.447098	0.552904
3	0.036806	0.963194
4	0.476519	0.523481

	precision	recall	f1-score	support
0	0.78	0.56	0.65	102
1	0.81	0.92	0.86	208
accuracy			0.80	310
macro avg	0.80	0.74	0.76	310
weighted avg	0.80	0.80	0.79	310



Accurancy of logistic dataset after grid search CV: 0.8032258064516129

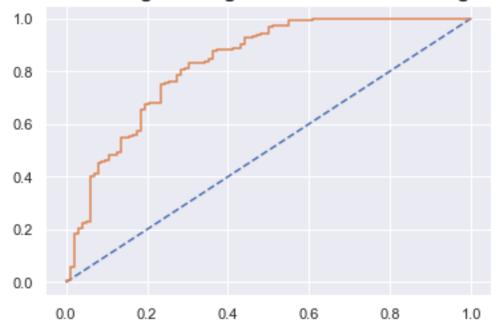




#ROC curve for training dataset after grid search Cv

ROC_AUC score: 0.830

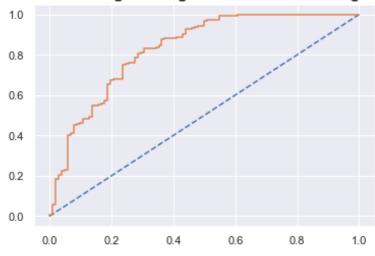
ROC CURVE for logistic Regrassion train data after grid search



#ROC CURVE FOR TESTING DATA AFTER GRID SEARCH

ROC_AUC score: 0.819

ROC CURVE for Logistic Regression test data after grid search



LDA

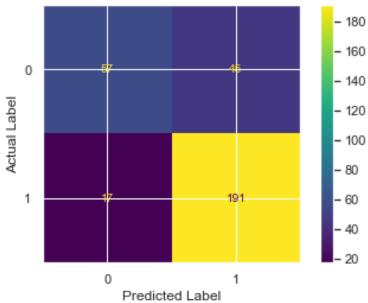
[[57 45]

[17 191]]

	precision		reca	all f	1-sco	ore	supp	ort
0	0.	77	0.5	6	0.6	5	102	
1	0.	81	0.9	2	0.86	6	208	
accura	асу				0.80)	310	
macro	avg	0.7	'9	0.7	4	0.75	5	310
weighted	l avg	0.	80	0.8	80	0.7	9	310

Accuracy of train dataset: 0.8

Confusion Matrix for LDA train data



0.8208955223880597

[[26 16]

[8 84]]

precision	recall	f1-score	support

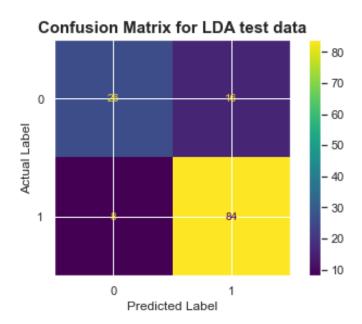
accuracy		0.8	2 13	4
macro avg	0.80	0.77	0.78	134
weighted ava	0.82	0.82	0.82	134

accuracy of test dataset: 0.8208955223880597

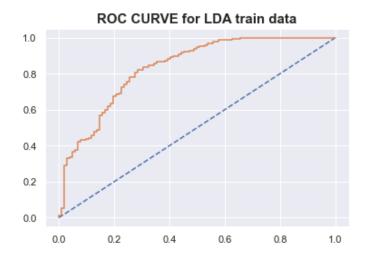
Confusion matrix for the test data

[[26 16]

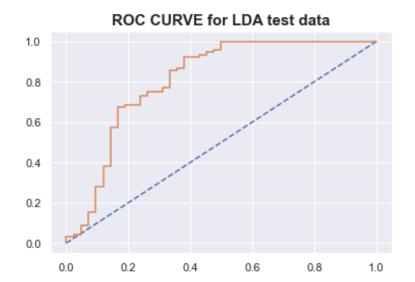
[8 84]]



ROC_AUC score: 0.834



ROC_AUC score: 0.810



View the Intercept and Coefficents:::

[-3.00532818]

features coef

- 0 Age 0.314051
- 1 Gender 1.370432
- 2 Engineer -0.344473
- 3 MBA 0.412223
- 4 Work Exp -0.204274
- 5 Salary -0.059643
- 6 Distance -0.224531
- 7 license -2.733445

Out[68]:

coef

Gender 3.937053

coef

MBA 1.510172

Age 1.368959

Salary 0.942101

Work Exp 0.815239

Distance 0.798891

Engineer 0.708594

license 0.064995

get importance

Feature: 0, Score: 0.31405

Feature: 1, Score: 1.37043

Feature: 2, Score: -0.34447

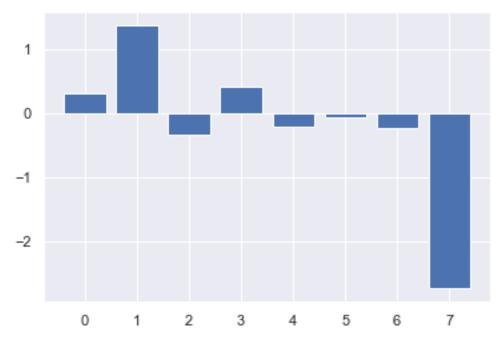
Feature: 3, Score: 0.41222

Feature: 4, Score: -0.20427

Feature: 5, Score: -0.05964

Feature: 6, Score: -0.22453

Feature: 7, Score: -2.73345



[[0.31405083 1.37043247 -0.34447293 0.41222337 -0.20427415 -0.05964326 -0.22453106 -2.73344538]]

#Applying Grid Search CV on LDA data

GridSearchCV(cv=3,

 $estimator = Latent Dirichlet Allocation (learning_method='online',$

n_jobs=1),

param_grid={'learning_decay': [0.75, 0.8, 0.85],

'n_components': [6, 8, 10, 12]})

{'learning_decay': 0.85, 'n_components': 6}

LatentDirichletAllocation(learning_decay=0.85, learning_method='online', n_components=6, n_jobs=1)

#NAIVE BAYES:

accuracy

GaussianNB()

 macro avg
 0.79
 0.72
 0.74
 310

 weighted avg
 0.79
 0.79
 0.78
 310

0.79

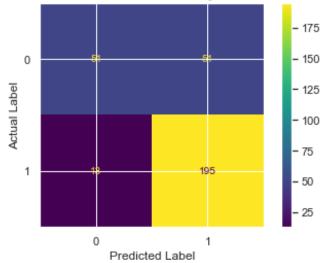
310

accuracy of train dataset: 0.7935483870967742

Confusion matrix for the train data [[51 51]

[13 195]]



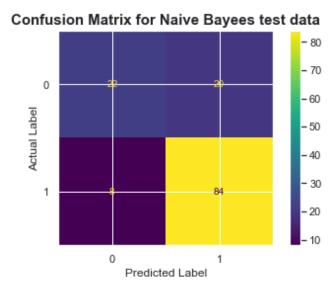


0.7910447761194029

[[22 20] [8 84]] precision recall f1-score support 0.52 42 0 0.73 0.61 1 0.81 0.91 92 0.86 accuracy 0.79 134 macro avg 0.77 0.72 0.73 134 weighted avg 0.78 0.79 0.78 134

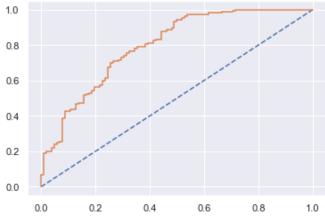
accuracy of test dataset: 0.7935483870967742

Confusion matrix for the test data [[22 20] [8 84]]



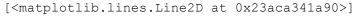
ROC_AUC score: 0.798

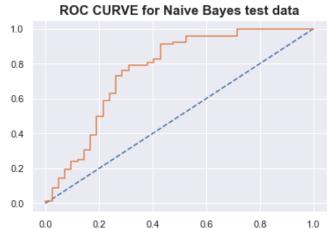




ROC_AUC score: 0.766

Out[112]:





#KNN

KNeighborsClassifier()

Performance Matrix on train data set

0.8387096774193549

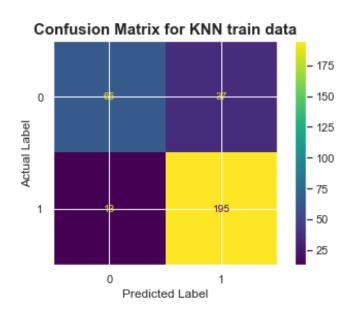
[[65 37] [13 195]]

13 195		cision	rec	all 1	f1-sc	ore	supp	oort
0 1		0.83 0.84	0.6 0.9		0.7		102 208	
accura	•	0.8	84	0.	0.8 79	4 0.8	310 0	310

weighted avg 0.84 0.84 0.83 310

accuracy of train dataset: 0.8387096774193549

Confusion matrix for the train data [[65 37] [13 195]]

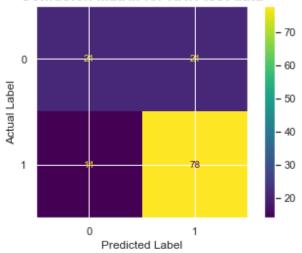


Performance Matrix on test data set

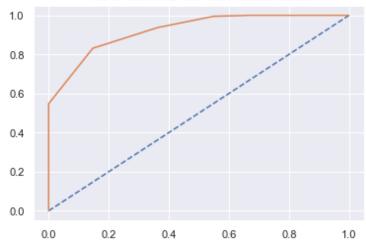
0.7388059701492538 [[21 21] [14 78]] precision recall f1-score support 0 0.60 0.50 0.55 42 1 0.79 0.85 0.82 92 0.74 134 accuracy macro avg 0.69 0.67 0.68 134 weighted avg 0.73 0.74 0.73 134

accuracy of test dataset: 0.7388059701492538 Confusion matrix for the test data [[21 21] [14 78]]

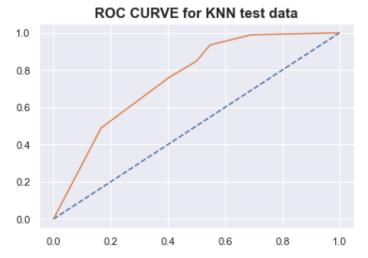
Confusion Matrix for KNN test data



ROC CURVE for KNN train data



ROC_AUC score:0.754



#Applying grid Search on KNN data

#for n_neighbours/k=7

KNeighborsClassifier(n_neighbors=7)

0.8354838709677419

[[64 38] [13 195]] precision recall f1-score support 0 0.83 0.63 0.72 102 1 0.84 0.94 208 0.88 0.84 310 accuracy macro avg 0.83 0.78 0.80 310 weighted avg 0.84 0.84 0.83 310

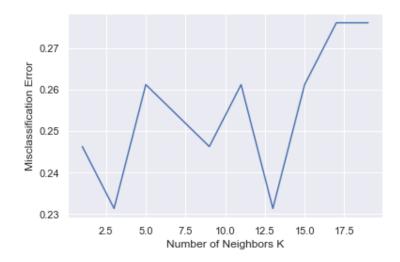
Performance Matrix on test data set

0.746268656716418 [[21 21] [13 79]] precision recall f1-score support 0 0.62 0.50 0.55 42 1 0.79 0.86 0.82 92 accuracy 0.75 134 0.70 macro avg 0.69 0.68 134 weighted avg 0.74 0.74 0.75 134

empty list that will hold accuracy scores:

[0.24626865671641796, 0.23134328358208955, 0.26119402985074625, 0.25373134328358204, 0.24626865671641796,

0.26119402985074625, 0.23134328358208955, 0.26119402985074625, 0.27611940298507465, 0.27611940298507465]



#for k=19

0.7903225806451613

[[49 53]

[12 196]]

pre	cision	reca	all f1	l-sco	ore	supp	ort
0	0.80	0.4	8	0.60	0	102	
1	0.79	0.9	4	0.86	6	208	
accuracy				0.79)	310	
macro avg	3.0	30	0.7	1	0.7	3	310
weighted av	g 0.	.79	0.7	79	0.7	77	310

Performance Matrix on test data set:

0.7238805970149254

[[17 25]

[12 80]]

pro	ecision	recall	f1-score	support
0 1		0.40 0.87		42 92
accuracy	,		0.72	134

macro avg	0.67	0.64	0.65	134
weighted avg	0.71	0.72	0.71	134

Performance Matrix on test data set

0.7238805970149254

[[17 25]

[12 80]]

precision recall f1-score support

0 0.59 0.40 0.48 42 1 0.76 0.87 0.81 92

accuracy 0.72 134 macro avg 0.67 0.64 0.65 134 weighted avg 0.71 0.72 0.71 134

#for k=17

KNeighborsClassifier(n_neighbors=17)

Performance Matrix on train data set:

0.7903225806451613

[[51 51]

[14 194]]

precision recall f1-score support

0 0.78 0.50 0.61 102 1 0.79 0.93 0.86 208

accuracy 0.79 310 macro avg 0.79 0.72 0.73 310 weighted avg 0.79 0.79 0.78 310

Performance Matrix on test data set:

0.7238805970149254

[[17 25]

[12 80]]

precision recall f1-score support

#for k=13

0.8129032258064516 [[57 45] [13 195]] precision recall f1-score support 0 102 0.81 0.56 0.66 1 0.81 0.94 0.87 208 accuracy 0.81 310 macro avg 0.81 0.75 0.77 310 0.81 0.80 weighted avg 0.81 310

Accuracy of the KNN train data for k=13 0.8129032258064516

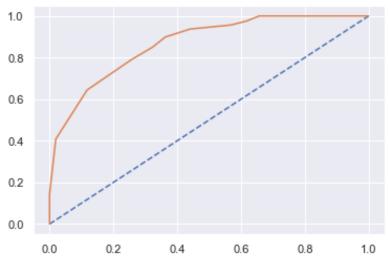
Performance Matrix on test data set

0.7686567164179104 [[22 20] [11 81]] precision recall f1-score support 0 0.67 0.52 0.59 42 1 0.80 0.88 0.84 92 134 accuracy 0.77 macro avg 0.73 0.70 0.71 134 weighted avg 0.76 0.77 0.76 134

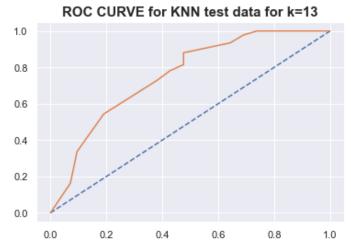
Accuracy of the KNN test data for k=13 0.7686567164179104

ROC_AUC score: 0.868

ROC CURVE for KNN train data for k=13

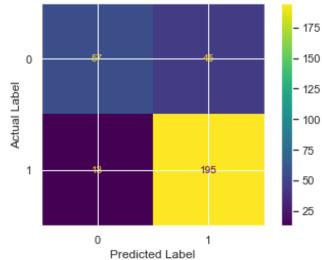


ROC_AUC score:0.755

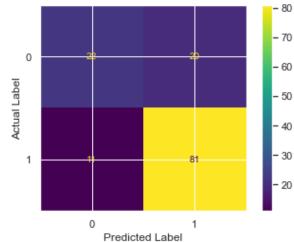


Confusion matrix for the train data for k=13 [[57 45] [13 195]]

Confusion Matrix for KNN train data for k=13



Confusion Matrix for KNN test data for k=13



ADA BOOST

AdaBoostClassifier(n_estimators=100, random_state=1)

```
0.8838709677419355
```

[[77 25]

[11 197]]

pı	recision	recall	f1-score	support
0	0.88	0.75	0.81	102
1	0.89	0.95	0.92	208

accuracy		0.8	8 31	0
macro avg	0.88	0.85	0.86	310
weighted avg	0.88	0.88	0.88	310

accuracy of train dataset: 0.8838709677419355

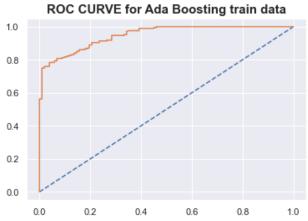
Confusion matrix for the train data [[70 32] [11 197]]



	0	1
0	0.495707	0.504293
1	0.486651	0.513349
2	0.493247	0.508753
3	0.492490	0.507510
4	0.503419	0.498581

predict probabilities

ROC_AUC score: 0.949



Performance Matrix on test data set

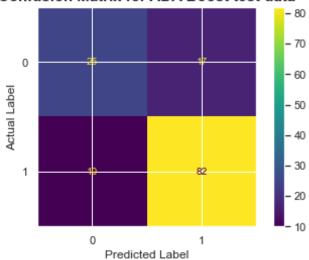
0.7910447761194029

[[26 16] [12 80]]

precis	ion re	ecall	f1-scc	re sup	oort
0 0.0	68 C).62	0.65	5 42	
1 0.8	83 C).87	0.85	92	
accuracy			0.79	134	
macro avg	0.76	0	.74	0.75	134
weighted avg	0.79) (0.79	0.79	134

accuracy of test dataset: 0.7910447761194029 Confusion matrix for the test data [[25 17] [10 82]]

Confusion Matrix for ADA Boost test data

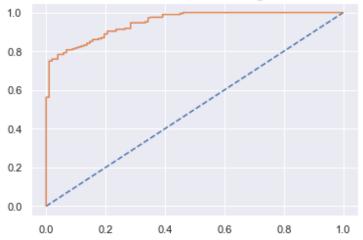


	0	1
0	0.495707	0.504293
1	0.486651	0.513349
2	0.493247	0.508753
3	0.492490	0.507510
4	0.503419	0.498581

predict probabilities:

ROC_AUC score: 0.949

ROC CURVE for Ada Boosting train data



0.7985074626865671

[[25 17] [10 82]]

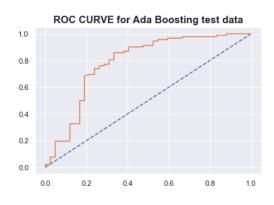
	precisi	on	recall	f1-sc	core	support		
0	0.7	1	0.60	0.6	65	42		
1	8.0	3	0.89	0.8	36	92		
accura	су			0.8	80	134		
macro	avg	0.77	7 0	.74	0.75	5	134	
weighted	avg	0.7	' 9 (08.0	0.7	' 9	134	

accuracy of test dataset: 0.7910447761194029

Confusion matrix for the test data [[25 17] [10 82]]

Confusion Matrix for ADA Boost test data - 80 - 70 - 60 - 50 - 40 - 30 - 20 - 10

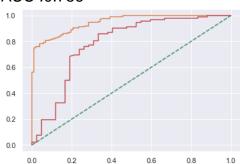
Predicted Label



ROC_AUC score:0.786

predict probabilities:

AUC: 0.949 AUC: 0.786



#GRADIENT BOOSTING:

Performance Matrix on train data set

[1 207]]

precision recall f1-score support

0 0.99 0.91 0.95 102

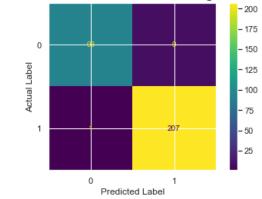
1 0.96 1.00 0.98 208

accuracy 0.97 310 macro avg 0.97 0.95 0.96 310 weighted avg 0.97 0.97 0.97 310

accuracy of train dataset: 0.967741935483871

Confusion matrix for the train data [[93 9] [1 207]]

Confusion Matrix for Gradient Boosting train data



predict probabilities:

ROC_AUC score: 0.998



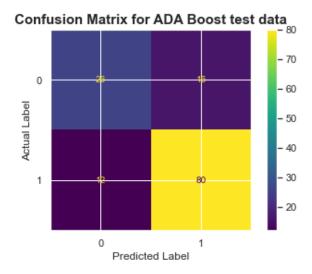
Performance Matrix on test data set

0.7686567164179104

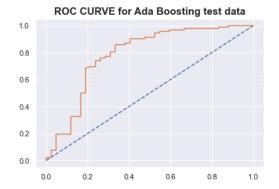
[[25 17] [14 78]] precision recall f1-score support 0.60 42 0 0.64 0.62 0.85 1 0.82 0.83 92 accuracy 0.77 134 macro avg 0.73 0.72 0.73 134 weighted avg 0.76 0.77 0.77 134

accuracy of test dataset: 0.7686567164179104

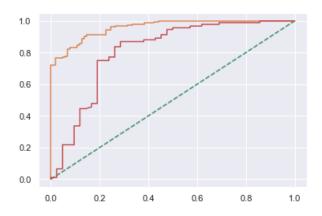
Confusion matrix for the test data [[25 17] [14 78]]



ROC_AUC score:0.786



predict probabilities



#GRADIENT BOOSTING:

Performance Matrix on train data set:

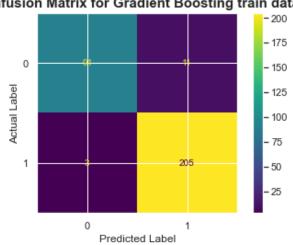
0.967741935483871 [[93 9] [1 207]] precision recall f1-score support 0 0.99 0.91 0.95 102 1.00 1 0.96 0.98 208 0.97 310 accuracy macro avg 0.97 0.96 310 0.95 weighted avg 0.97 0.97 0.97 310

accuracy of train dataset: 0.967741935483871

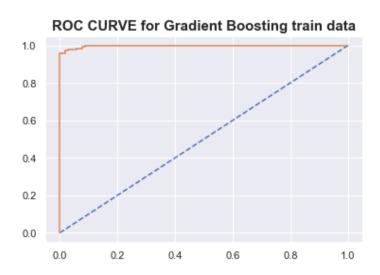
Confusion matrix for the train data

[[93 9] [1 207]]

Confusion Matrix for Gradient Boosting train data



predict probabilities:



Performance Matrix on test data set

0.7686567164179104 [[25 17] [14 78]]

precision recall f1-score support

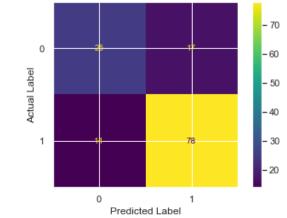
0 0.64 0.60 0.62 42 1 0.82 0.85 0.83 92

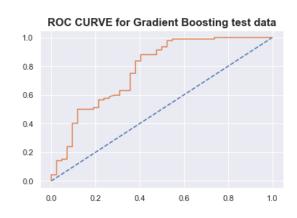
accuracy 0.77 134 macro avg 0.73 0.72 0.73 134 weighted avg 0.76 0.77 0.77 134

accuracy of test dataset: 0.7686567164179104

Confusion matrix for the test data [[25 17] [12 80]]







ROC_AUC score :0.775

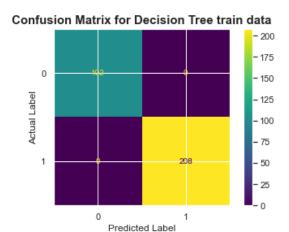
#DECISION TREE:

DecisionTreeClassifier()

accuracy of train dataset: 0.7835820895522388

Confusion matrix for the train data

[[91 11] [3 205]]



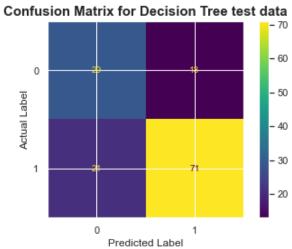
0.7835820895522388

[[30 12] [17 75]]

recall f1-score support precision 0 0.64 0.71 0.67 42 1 0.86 0.82 0.84 92 accuracy 0.78 134 macro avg 0.75 0.76 0.76 134 weighted avg 0.79 0.78 0.79 134

accuracy of test dataset: 0.7835820895522388 Confusion matrix for the test data [[30 12]

[17 75]]

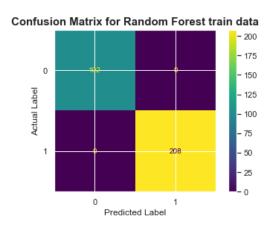


#RANDOM FOREST:

RandomForestClassifier(random_state=1)

```
1.0
[[102 0]
[ 0 208]]
        precision
                   recall f1-score support
      0
           1.00
                   1.00
                           1.00
                                   102
      1
           1.00
                   1.00
                           1.00
                                   208
  accuracy
                          1.00
                                   310
 macro avg
               1.00
                       1.00
                               1.00
                                       310
weighted avg
                1.00
                        1.00
                                1.00
                                        310
```

accuracy of train dataset: 1.0 Confusion matrix for the train data [[102 0] [0 208]]

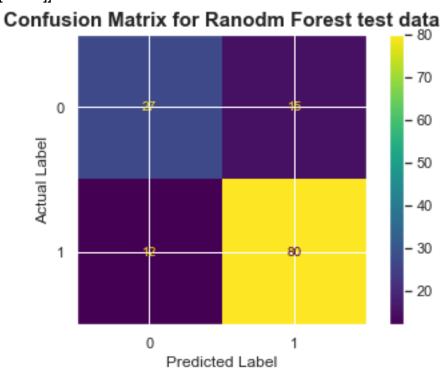


0.8059701492537313 [[26 16] [10 82]] precision recall f1-score support 0 0.72 0.62 0.67 42 1 0.84 0.89 0.86 92

accuracy 0.81 134 macro avg 0.78 0.76 0.76 134 weighted avg 0.80 0.81 0.80 134

accuracy of test dataset: 0.8059701492537313

Confusion matrix for the test data [[27 15] [12 80]]



#APLLYING GRID SEARCH CV ON RANDOM FOREST:

GridSearchCV(cv=10, estimator=RandomForestClassifier(random_state=0), param_grid={'max_depth': [5, 7, 10], 'max_features': [4, 6], 'min_samples_leaf': [5, 10], 'min_samples_split': [50, 100], 'n_estimators': [100, 200, 300]})

{'max_depth': 5, 'max_features': 4,

'min_samples_leaf': 5, 'min_samples_split': 50, 'n_estimators': 200}

RandomForestClassifier(max_depth=5, max_features=4, min_samples_leaf=5, min_samples_split=50, n_estimators=200, random_state=0)

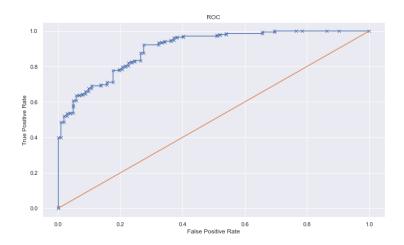
precision recall f1-score support

0 0.91 0.60 0.72 102 1 0.83 0.97 0.90 208

accuracy 0.85 310 macro avg 0.87 0.78 0.81 310 weighted avg 0.86 0.85 0.84 310

Area under Curve is 0.9019607843137255

array([[22, 20], [9, 83]], dtype=int64)

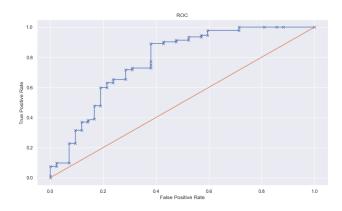


precision recall f1-score support

0 0.71 0.52 0.60 42

1 0.81 0.90 92 0.85 accuracy 0.78 134 0.73 134 macro avg 0.76 0.71 weighted avg 0.78 0.78 0.77 134

#from sklearn.metrics import roc_curve,roc_auc_score:



Area under Curve is 0.776268115942029 **#BAGGING ON CART:**

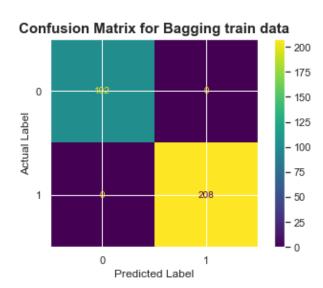
BaggingClassifier(base_estimator=DecisionTreeClassifier(), n_estimators=100, random_state=1)

Performance Matrix on train data set:

1.0 [[102 0] [0 208]] precision recall f1-score support 0 1.00 1.00 1.00 102 1 1.00 1.00 1.00 208 accuracy 1.00 310 macro avg 1.00 1.00 1.00 310 weighted avg 1.00 1.00 1.00 310

accuracy of train dataset: 1.0

Confusion matrix for the train data [[102 0] [0 208]]

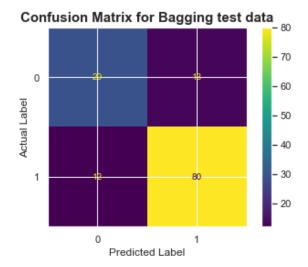


Performance Matrix on test data set:

0.8134328358208955 [[29 13] [12 80]] precision recall f1-score support 0.69 0 0.71 0.70 42 1 0.86 0.87 0.86 92 134 accuracy 0.81 0.78 0.78 0.78 134 macro avg weighted avg 0.81 0.81 0.81 134

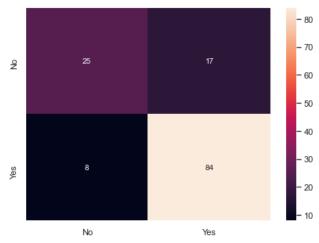
accuracy of test dataset: 0.8134328358208955

Confusion matrix for the test data [[29 13] [12 80]]



#BAGGING ON RANDOM FOREST:

#n- estimators s the number of trees in the forest: 0.8134328358208955



BaggingClassifier(base_estimator=RandomForestClassifier(), n_estimators=50, random_state=0)

Performance Matrix on train data set.

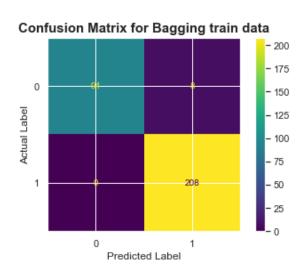
0.9741935483870968

[[94 8] [0 208]]

precision recall f1-score support

0	1.00	0.92	0.96	102
1	0.96	1.00	0.98	208

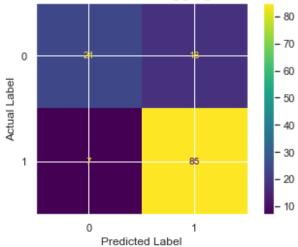
accuracy		0.9	7 31	0
macro avg	0.98	0.96	0.97	310
weighted avg	0.98	0.97	0.97	310



Accuracy on Bagging train data: 0.9741935483870968

0.81343 [[24 18] [7 85]]	2835	582089	955					
	pred	cision	reca	all f	1-sc	ore	supp	ort
0	0.77		0.5	7	0.66		42	
1		0.83		2	0.87		92	
accur	асу				0.81	l	134	
macro weighte	_	_	80).81	0.7	'5 81	0.7		134 134
Weigine	a av	, .	.01	Ο.	0 1	0.0	50	10-

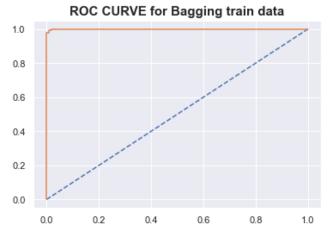
Confusion Matrix for Bagging test data



Accuracy on Bagging test data: 0.813432835820895

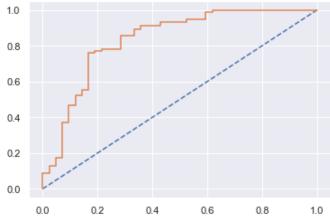
predict probabilities:

ROC_AUC score: 1.000



ROC_AUC score :0.836





#CROSS VALIDATION ON ALL THE ABOVE CREATED MODELS #1.LOGISTIC REGRESSION:

array([0.87096774, 0.80645161, 0.74193548, 0.67741935, 0.80645161, 0.80645161, 0.67741935, 0.77419355, 0.77419355, 0.80645161])

array([0.92857143, 0.78571429, 0.71428571, 0.85714286, 0.69230769, 0.69230769, 0.84615385, 0.76923077, 0.84615385, 0.69230769])

LDA

from sklearn.model_selection import cross_val_score scores = cross_val_score(LDA_m odel, X_train, y_train, cv=10) scores

array([0.92857143, 0.78571429, 0.64285714, 0.85714286, 0.69230769, 0.69230769, 0.84615385, 0.84615385, 0.84615385, 0.69230769])

NAIVE BAYES

array([0.87096774, 0.77419355, 0.90322581, 0.67741935, 0.80645161, 0.80645161, 0.67741935, 0.70967742, 0.83870968, 0.67741935])

array([0.92857143, 0.78571429, 0.71428571, 0.78571429, 0.76923077, 0.76923077, 0.84615385, 0.84615385, 0.84615385, 0.61538462])

KNN

array([0.87096774, 0.83870968, 0.74193548, 0.83870968, 0.80645161, 0.70967742, 0.70967742, 0.74193548, 0.74193548, 0.77419355])

array([0.85714286, 0.71428571, 0.64285714, 0.71428571, 0.84615385,

0.61538462, 0.84615385, 0.84615385, 0.76923077, 0.53846154])

ADA BOOSTING

- array([0.83870968, 0.83870968, 0.80645161, 0.61290323, 0.77419355, 0.77419355, 0.64516129, 0.80645161, 0.74193548, 0.64516129])
- array([0.92857143, 0.78571429, 0.85714286, 0.71428571, 0.69230769, 0.61538462, 0.84615385, 0.69230769, 0.76923077, 0.69230769])

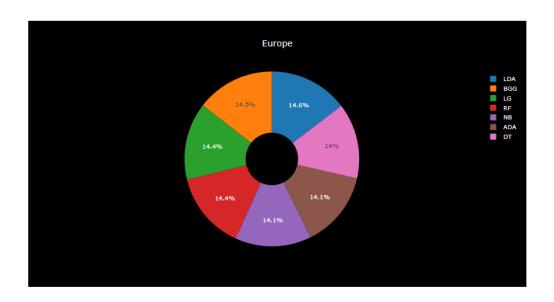
GRADIENT BOOSTING

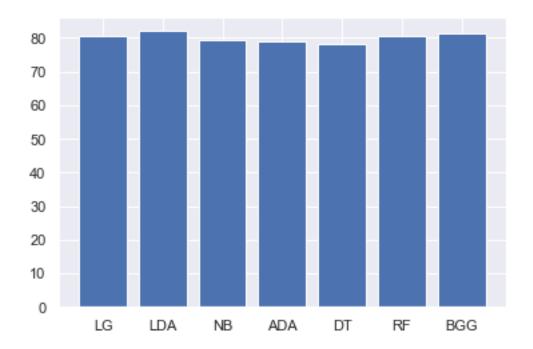
array([0.90322581, 0.80645161, 0.74193548, 0.67741935, 0.83870968, 0.77419355, 0.67741935, 0.80645161, 0.80645161, 0.67741935]) array([0.90322581, 0.80645161, 0.74193548, 0.67741935, 0.83870968, 0.77419355, 0.67741935, 0.80645161, 0.80645161, 0.67741935])

RANDOM FOREST

- array([0.90322581, 0.83870968, 0.77419355, 0.74193548, 0.80645161, 0.74193548, 0.70967742, 0.74193548, 0.87096774, 0.74193548]) array([0.92857143, 0.78571429, 0.78571429, 0.71428571, 0.69230769, 0.53846154, 0.84615385, 0.84615385, 0.84615385, 0.92307692]) BAGGING ON RANDOM FOREST
- rray([0.90322581, 0.87096774, 0.80645161, 0.77419355, 0.77419355, 0.80645161, 0.74193548, 0.74193548, 0.83870968, 0.67741935])
- rray([1. , 0.78571429, 0.71428571, 0.71428571, 0.69230769, 0.69230769, 0.84615385, 0.84615385, 0.84615385, 0.69230769])

#1.4 Which model performs the best?





#1.5 What are your business insights?

Data has evidence of multicollinearity which needs to be dealt with. 10

• Data has an issue of minority sampling which needs to be addressed by apply SMOTE algorithm

- Amongst the three models logistic regression, Bagging and RF seems to be the best model with wonderfull sensitivity and specificity.
- However, by applying bagging, we can get much more realistic and reliable output.
- The increase in sensitivity can lead to improved efficiency and conversion in customer reach-out campaigns.

#2.1 Pick out the Deal (Dependent Variable) and Description columns into a separate data frame.

DATASET/SAMPLE DATA

	deal	description	episode	category	entrepreneurs	location	website	askedFor	exchangeForStake	valuation	season	shark1
0 F	alse	Bluetooth device implant for your ear.	1	Novelties	Darrin Johnson	St. Paul, MN	NaN	1000000	15	6666667	1	Barbara Corcoran
1	True	Retail and wholesale pie factory with two reta	1	Specialty Food	Tod Wilson	Somerset, NJ	http://whybake.com/	460000	10	4600000	1	Barbara Corcoran
2	True	Ava the Elephant is a godsend for frazzled par	1	Baby and Child Care	Tiffany Krumins	Atlanta, GA	http://www.avatheelephant.com/	50000	15	333333	1	Barbara Corcoran
3 F	alse	Organizing, packing, and moving services deliv	1	Consumer Services	Nick Friedman, Omar Soliman	Tampa, FL	http://collegehunkshaulingjunk.com/	250000	25	1000000	1	Barbara Corcoran
4 F	alse	Interactive media centers for healthcare waiti	1	Consumer Services	Kevin Flannery	Cary, NC	http://www.wispots.com/	1200000	10	12000000	1	Barbara Corcoran

#Checking Null Values.

deal 0

```
description
                   0
episode
                   0
category
                   0
entrepreneurs
                     0
location
                  0
website
askedFor
                    0
exchangeForStake
                        0
valuation
                   0
season
shark1
                  0
shark2
                  0
shark3
                  0
shark4
                  0
shark5
                  0
                0
title
episode-season
Multiple Entreprenuers 0
dtype: int64
```

#Pick out the Deal (Dependent Variable) and Description columns into a separate data f rame:



#Create two corpora, one with those who secured a Deal, the other with those who did not secure a deal.

#Info:

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 387 entries, 1 to 494
Data columns (total 2 columns):
# Column
                  Non-Null Count Dtype
---
0 deal 387 non-null object
1 description 387 non-null object
dtypes: object(2)
memory usage: 9.1+ KB
    deal
                                        description
1 True Retail and wholesale pie factory with two reta...
2 True Ava the Elephant is a godsend for frazzled par...
3 False Organizing, packing, and moving services deliv...
4 False Interactive media centers for healthcare waiti...
5 True One of the first entrepreneurs to pitch on Sha...
<class 'pandas.core.frame.DataFrame'>
Int64Index: 204 entries, 1 to 494
Data columns (total 2 columns):
                 Non-Null Count Dtype
 # Column
 0 deal 204 non-null object
1 description 204 non-null object
dtypes: object(2)
memory usage: 4.8+ KB
         deal
                                          description
  count 204
                                                 204
                                                 203
 unique
 top True Echo Valley Meats is a retail, online gift cat...
    freq 204
```

True Head sample dataset:



True Corpus 50302 False Corpus 34899

```
Info:
<class 'pandas.core.frame.DataFrame'>
Int64Index: 204 entries, 1 to 494
Data columns (total 2 columns):
# Column Non-Null Count Dtype
--- -----
0 description 204 non-null object
1 chars 204 non-null object
dtypes: object(2)
memory usage: 4.8+ KB
```

['i', 'me', 'my', 'myself', 'we', 'our', 'ours', 'ourselves', 'you', "you're", "you've", "you'll", "you'd", 'your', 'yourself', 'yourselves', 'he', 'him', 'his', 'himself', 'she', "she's", 'her', 'her s', 'herself', 'it', "it's", 'itself', 'they', 'them', 'their', 'theirs', 'themselves', 'what', 'which', '

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who', 'whom', 'this', 'that', "that'll", 'these', 'those', 'am', 'is', 'are', 'was', 'were', 'be', 'been',
'being', 'have', 'has', 'had', 'having', 'do', 'does', 'did', 'doing', 'a', 'an', 'the', 'and', 'but', 'if',
'or', 'because', 'as', 'until', 'while', 'of', 'at', 'by', 'for', 'with', 'about', 'against', 'between', 'int
o', 'through', 'during', 'before', 'after', 'above', 'below', 'to', 'from', 'up', 'down', 'in', 'out', 'on'
, 'off', 'over', 'under', 'again', 'further', 'then', 'once', 'here', 'there', 'when', 'where', 'why', 'h
ow', 'all', 'any', 'both', 'each', 'few', 'more', 'most', 'other', 'some', 'such', 'no', 'nor', 'not', 'o
nly', 'own', 'same', 'so', 'than', 'too', 'very', 's', 't', 'can', 'will', 'just', 'don', "don't", 'should', "s
hould've", 'now', 'd', 'll', 'm', 'o', 're', 've', 'y', 'ain', 'aren', "aren't", 'couldn', "couldn't", 'didn',
"didn't", 'doesn', "doesn't", 'hadn', "hadn't", 'hasn', "hasn't", 'haven', "haven't", 'isn', "isn't"
, 'ma', 'mightn', "mightn't", 'mustn', "mustn't", 'needn', "needn't", 'shan', "shan't", 'shouldn'
, "shouldn't", 'wasn', "wasn't", 'weren', "weren't", 'won', "won't", 'wouldn', "wouldn't"]
True:
['Retail', 'wholesale', 'pie', 'factory', 'two', 'retail', 'locations', 'New', 'Jersey', '.']
['Ava', 'Elephant', 'godsend', 'frazzled', 'parents', 'young', 'children', 'everywhere', '.', 'This
', 'talking', 'medicine', 'dispenser', 'makes', 'easy', 'administer', 'medicine', 'little', 'ones', 't
urning', 'experience', 'playful', 'providing', 'positive', 'reinforcement', '.']
['One', 'first', 'entrepreneurs', 'pitch', 'Shark', 'Tank', ',', 'Susan', 'Knapp', 'presented', 'A', '
Perfect', 'Pear', ',', 'line', 'pear-focused', 'gourmet', 'food', 'products', '.', 'Sold', 'across', '6
50', 'retail', 'stores', ',', 'Perfect', 'Pear', 'product', 'portfolio', 'includes', 'jams', ',', 'jellies', ','
, 'spreads', ',', 'tapenades', ',', 'vinegars', ',', 'marinades', ',', 'dressings', 'many', 'others', ','
, 'designed', 'showcase', 'flavors', 'health', 'benefits', 'pears', '.']
['A', 'line', 'books', 'written', 'help', 'children', 'find', 'inner', 'calm', '.']
['Coverplay', 'slipcover', 'children', "'s", 'play', 'yards', '.', 'Much', 'like', 'mattress', ',', 'play',
'yards', 'ca', "n't", 'laundered', ',', 'yet', 'babies', 'children', 'spend', 'lots', 'time', ',', 'guess', '
leads', '.', 'Coverplay', 'rescue', '!', 'Fitting', 'snugly', 'standard', 'size', 'play', 'yards', ',', 'Co
verplay', 'offers', 'quick', 'solution', 'add', 'another', 'layer', 'protection', 'child', 'germ-harbo
ring', 'surface', 'play', 'yard', '.', 'Made', '95', '%', 'cotton', '5', '%', 'Lycra', ',', 'Coverplay', 'm
achine-washable', 'easy', 'maintain', '.', 'Indeed', ',', 'throwing', 'Coverplay', 'slipcover', 'wa
sh', 'much', 'easier', 'trying', 'remove', 'spill', "'s", 'gone', 'directly', 'onto', 'play', 'yard', '.', '
With', 'bright', 'stylish', 'designs', ',', "'II", 'also', 'make', 'play', 'yard', 'look', 'good', 'new', '.']
['A', 'web-based', 'company', 'buys', 'back', 'sells', '10', '%', 'unused', 'gift', 'cards', 'year',
U.S', '.']
['An', 'online', 'journaling', 'service', 'focused', 'facilitating', 'users', "'", 'progress', 'towards'
, 'achieving', 'maintaining', 'emotional', 'well-being', '.']
['Made-to-order', 'energy', 'bars', 'made', 'whole', ',', 'natural', 'ingredients', '.', 'Customers'
, 'choose', 'ingredients', 'go', 'highly', 'personalized', 'bars', '.']
['Sells', 'award-winning', 'barbecue', 'spice', 'rub', 'products', '.']
['Stainless', 'steel', 'identifying', 'charms', 'stick', 'food', 'grill', '.']
['A', 'wheat-free', 'soy-based', 'modeling', 'clay', ',', 'designed', 'children', 'wheat', 'allergies
```

['A', 'web', 'site', 'allows', 'college', 'students', 'buy', 'sell', 'class', 'notes', 'study', 'guides', '.

['Women', "'s", 'apparel', 'specially', 'designed', 'sizes', '12', '18', '.']

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['A', 'healthier', 'line', 'carbonated', 'beverages', 'featuring', 'organic', 'ingredients', ',', 'vita mins', ',', 'antioxidants', ',', '85', 'calories', 'per', '.']
['A', 'faux', 'golf', 'club', 'looks', 'like', '7', 'iron', 'conceals', 'urine', 'reservoir', ',', 'times', 'gol
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fers', 'need', 'relieve', 'restroom', 'nearby', '.']

['An', 'online', 'service', 'allowing', 'high', 'school', 'athletes', 'parents', 'profile', 'skills', 'mar ket', 'colleges', '.']

['Salad', 'dressings', 'using', 'tasty', 'blend', 'all-natural', 'spices', 'seasonings', '.']

['Designer', 'helmets', '.', 'The', 'company', 'owns', 'utility', 'patent', 'place', '3D', 'designs', 'motorcycle', 'helmets', 'well', 'kind', 'sporting', 'helmet', '.']

['Individually-packaged', 'degreasing', 'cleaning', 'wipes', 'formulated', 'cyclists', 'easily', 'r emove', 'grease', 'grime', 'working', 'bicycles', '.']

['A', 'way', 'save', 'lipstick', 'gets', 'stuck', 'bottom', 'tube', '.']

['Move', ',', 'Legos', '!', 'Qubits', 'new', 'construction', 'toy', 'kids', '.', 'Recommended', 'ages ', '4', '16', ',', 'even', 'adults', 'could', 'fun', 'new', 'shapes', '.', 'Created', 'independent', 'inve ntor', ',', 'Qubits', 'encourage', 'exploration', 'engineering', ',', 'architecture', ',', 'geometry', 'design', '.', 'Unlike', 'Lincoln', 'Logs', 'Tinker', 'Toys', ',', 'even', 'Legos', 'recent', 'years', ',', "'s", 'pre-determined', 'plan', 'follow', 'Qubits', ',', 'imagination', '.', 'Parents', 'also', 'apprec iate', 'Qubits', 'dishwasher-safe', '!', 'Qubits', '100', '%', 'made', 'USA', '.']

['A', 'reinvented', 'umbrella', 'hands-free', ',', 'impossible', 'invert', ',', 'protects', 'user', 'win d', 'chill', '.']

['Collar', 'stays', ':', 'ca', "n't", 'live', "'em", ',', 'ca', "n't", 'live', 'without', "'em", '.', 'For', 'man', 'struggled', 'keep', 'collars', 'pert', 'upright', ',', 'suffered', 'constant', 'shifting', 'plastic', 'collar', 'stays', ',', "'s", 'Wurkin', 'Stiffs', '.', 'This', 'company', 'makes', 'men', "'s", 'accessories ', 'long', 'haul', ',', 'offering', 'solutions', 'common', 'inconveniences', 'men', "'s", 'apparel', '.', 'The', 'Wurkin', 'Stiffs', 'signature', 'product', 'Power', 'Stays', ',', 'kept', 'securely', 'place', 'strong', 'magnets', '.', 'While', 'Power', 'Stays', 'made', 'men', "'s", 'dress', 'shirts', ',', 'com pany', 'also', 'produces', 'Polo', 'Stays', 'keep', 'polo', 'shirts', 'looking', 'crisp', '.', 'Wurkin', 'stiffs', 'expanded', 'offer', 'full', 'suite', 'men', "'s", 'accessories', ',', 'including', 'cufflinks', ',', 'RFID', 'wallets', ',', 'money', 'clips', ',', 'tie', 'bars', ',', 'travel', 'bags', '.']

['Dance', 'education', 'centers', 'children', '.']

['Allergy', 'season', 'bringing', '?', 'Maybe', "'s", 'time', 'give', 'First', 'Defense', 'Nasal', 'Screens', 'try', '.', 'These', 'screens', 'ward', 'allergies', 'without', 'medication', '.', 'First', 'Defense', 'Nasal', 'Screens', 'self-adhesive', 'strips', 'attach', 'nose', 'cover', 'nasal', 'passage', '.', 'They', 'filter', 'air', 'coming', 'nose', 'keeps', 'allergens', '.', 'This', 'product', 'tested', 'significantly', 'reduce', '99', '%', 'particles', '10', 'microns', '.', 'Even', 'sub', 'micron', 'levels', 'shown', 'effective', '77', '%', '.']

['Mod', 'Mom', 'Furniture', 'stylish', ',', 'high-quality', ',', 'made-to-order', 'furniture', 'childre n', "'s", 'bedrooms', 'playrooms', '.', 'These', 'carefully', 'crafted', 'pieces', 'long-lasting', ',', 'serve', 'child', 'many', 'years', '.', 'The', 'company', 'founded', 'eponymous', 'mom', 'dissati sfied', 'current', 'offerings', 'market', ',', 'expensive', 'uninspired', '.', 'Mod', 'Mom', 'Furnitur e', 'sources', 'eco-friendly', 'materials', ',', 'including', 'sustainable', 'formaldehyde-free', 'w ood', 'varnishing', 'products', '.']

['FlipOutz', 'flexible', 'silicon', 'bracelets', 'hold', 'five', 'coins', 'choosing', '.', 'Kids', 'person alize', 'Flip', 'Outz', 'five', 'numerous', 'available', 'choices', '.', 'You', 'also', 'swap', 'coins', '

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,', 'trade', 'friends', ',', 'even', 'set', 'online', 'profile', 'lets', 'show', 'coins', 'see', 'traded', 'coins', 'traveled', 'time', '.']
['A', 'country-style', 'apparel', 'store', 'sold', 'Sports', 'Authority', ',', 'truck', 'stops', 'travel', '
```

plazas', '.']

['A', 'children', "'s", 'seat', 'attachable', 'luggage', 'instantly', 'converts', 'travel', 'stroller', '.'] ['A', 'rubber', 'band', 'works', 'money', 'clip', '.']

['Light-up', 'decals', 'car', 'windows', '.']

['A', 'magnetic', 'skin', 'decorative', 'finish', 'applied', 'appliance', '.']

['A', 'new', 'kind', 'broom', 'built-in', 'scraper', '.']

['Cakes', 'made', 'scratch', 'family', 'recipes', '.', 'They', 'ship', 'nationwide', 'orders', 'place d', 'online', '.']

['An', 'impact-resistant', 'hydration', 'system', 'attaches', 'shoulder', 'pads', ',', 'aimed', 'foot ball', 'players', 'training', '.']

['The', 'Rocket', ',', 'company', "'s", 'flagship', 'product', ',', 'turn', 'anything', 'speaker', 'vibr ations', '.']

['Hy-Conn', 'super-fast', 'connector', 'fire', 'hydrants', 'garden', 'hoses', '.', 'The', 'Pro', 'Edit ion', 'connected', 'fire', 'hydrant', 'without', 'use', 'adapters', 'tools', '.', 'The', 'Home', 'edition', 'garden', 'hoses', '.']

['The', 'patented', 'CitiKitty', 'Cat', 'Toilet', 'Training', 'Kit', 'uses', 'proven', ',', 'disappearing', 'litter', 'box', 'technique', 'successfully', 'toilet', 'trained', 'cats', 'decades', '.', 'CitiKitty', "'s ", 'specially-designed', 'training', 'seat', 'fits', 'ALL', 'toilets', 'transitions', 'cats', 'age', ',', 'si ze', ',', 'breed', 'litter', 'box', 'toilet', '.', 'Any', 'healthy', 'cat', ',', 'three', 'months', 'age', 'older ', 'successfully', 'using', 'litter', 'box', 'candidate', 'toilet', 'training', '.']

['Shoes', 'interchangeable', 'uppers', 'allowing', 'user', 'easily', 'vary', 'look', '.']

['Aldo', 'Orta', 'Jewelry', 'makes', 'fashion', 'jewelry', 'royal', 'theme', '.']

['A', 'water', 'container', 'unscrews', 'bottom', 'well', 'top', 'ease', 'cleaning', '.']

['A', 'website', 'people', 'pre-purchase', 'night', 'town', 'without', 'fear', 'getting', 'turned', 'a way', 'venue', '.']

['An', 'online', 'service', 'people', 'buy', 'made-to-order', 'cartoon', 'drawings', 'cats', ',', 'pos ted', 'website', '.']

['Chord', 'Buddy', 'one-of-a-kind', 'learning', 'system', 'guitar', 'gets', 'playing', 'day', 'one', '.', 'Attach', 'tabs', 'acoustic', 'electric', 'guitar', '(', 'right-handed', ',', 'sorry', '!', ')', "'re", 'read y', 'make', 'music', '.', 'Chord', 'Buddy', 'basically', 'turns', 'real-life', 'guitar', 'one', 'easy', 'p lay', 'favorite', 'Rock', 'Band', 'Guitar', 'Hero', 'games', '.', 'One', 'time', ',', 'remove', 'hte', 't abs', 'learn', 'play', 'chords', '.', 'Using', 'included', 'instruction', 'book', ',', 'songbook', ',', 'D VD', 'two-month', 'lesson', 'plan', ',', 'learn', '100', 'songs', '!']

['You', 'Smell', 'Soap', 'luxurious', 'without', 'taking', 'seriously', '.', 'Made', 'natural', 'ingred ients', 'like', 'shea', 'butter', 'olive', 'oil', ',', 'You', 'Smell', 'Soap', 'fragrant', 'yet', 'gentle', 's oothing', 'skin', '.', 'Made', 'shea', 'butter', 'olive', 'oil', ',', 'bars', 'create', 'unmatched', 'soft', 'creamy', 'lather', '.', 'You', 'Smell', 'Soap', 'naturally', 'fragrant', 'yet', 'gentle', 'soothing', 'skin', '.', 'Each', 'bar', 'comes', 'wrapped', 'signature', '``', 'You', 'Smell', "''", 'packaging', 'vintage-inspired', 'truly', 'conversation-sparking', '.', 'You', 'Smell', 'Soap', 'vegan', 'free', 'parabens', ',', 'phthalates', ',', 'gluten', '.']

['Wine', 'Balloon', '(', 'sold', 'name', 'Air', 'Cork', ')', 'A', 'product', 'preserves', 'wine', 'inside', 'already-opened', 'bottle', '.', 'It', 'works', 'inflating', 'balloon', 'inside', 'bottle', 'crowd', 'air', 'prevent', 'contact', 'wine', '.']

['A', 'towel', 'designed', 'like', 'poncho', 'kids', 'change', 'wet', 'bathing', 'suits', 'without', 'an yone', 'seeing', '.']

['A', 'water-resistant', ',', 'even', 'better', ',', 'racoon-resistant', 'fabric', 'cover', 'garbage', 'bi ns', 'sizes', '.']

['Designer', 'whole-leaf', 'teas', 'accessories', '.']

['Adjustable', 'necklaces', 'bracelets', 'interchangeable', 'accents', 'kids', 'adults', 'ages', '.'

['The', 'Painted', 'Pretzel', 'sells', 'creative', ',', 'gourmet', 'chocolate-covered', 'pretzel', 'co nfections', 'brick-and-mortar', 'retail', 'stores', 'online', '.', 'The', 'business', 'offers', 'pretzel', 'knots', ',', 'pretzel', 'rods', ',', 'pretzel', 'bark', 'pretzel', 'turtles', 'variety', 'flavors', 'sizes', ',', 'configured', 'bundles', 'samplers', '.', 'The', 'company', 'also', 'expanded', 'corporate', 'g ifts', ',', 'count', 'numerous', 'Fortune', '500', 'companies', 'among', 'customers', '.', 'Since', 'appearing', 'show', ',', 'The', 'Painted', 'Pretzel', 'also', 'begun', 'fundraising', 'business', '.', 'Organizations', 'seeking', 'raise', 'money', 'buy', 'customized', 'pretzels', 'resale', 'toward s', 'cause', '.']

['ReadeREST', 'magnetized', 'clip', 'holds', 'eyewear', "'s", 'use', '.', 'lt', 'works', 'reading', 'glasses', ',', 'sunglasses', ',', 'even', 'non-eyewear', 'items', 'might', 'need', 'keep', 'close', 'hand', ',', 'like', 'work', 'ID', 'maybe', 'pen', '.', 'You', 'skip', 'granny', 'chains', 'lanyards', 'si mply', 'attach', 'ReadeREST', 'shirt', '.', 'The', 'strong', 'magnets', 'keep', 'clip', 'securely', 'place', ',', 'V-shape', 'provides', 'convenient', 'resting', 'place', 'items', 'always', 'going', 'as tray', '.']

['The', 'Smart', 'Baker', 'known', 'insightfully', 'helpful', 'kitchen', 'tools', '.', 'The', 'company', 'known', 'collapsible', 'cupcake', 'stands', ',', 'display', '100', 'cupcakes', 'stores', 'flat', 'us e', '.', 'These', 'cupcake', 'stands', 'also', 'adjustable', ',', 'adapt', 'configuration', 'based', 'many', 'treats', 'plan', 'serve', '.', 'The', 'Smart', 'Baker', 'also', 'brought', 'us', 'pre-cut', 'par chment', 'paper', ',', 'purchase', 'round', 'rectangular', 'shapes', 'according', 'molds', "'ll", 'u sing', '.', 'These', 'super', 'helpful', 'pre-cut', 'sheets', 'outfitted', 'tabs', 'poke', 'sides', ',', 'us e', 'lift', 'cake', 'mold', 'done', '.', 'You', 'might', 'also', 'know', 'The', 'Smart', 'Baker', 'cheat', 'sheet', 'aprons', ',', 'adorned', 'useful', 'measuring', 'conversion', 'tables', '.', 'These', 'aprons', 'save', 'stains', ',', 'spills', ',', 'measuring', 'mistakes', '.']

['Kisstixx', 'fun', 'lip', 'balm', 'comes', 'pairs', 'according', 'compatible', 'flavors', '.', 'Each', 'Kisstixx', 'lipstick', '(', 'try', 'saying', 'three', 'times', 'fast', ')', 'packs', 'punch', 'flavor', ',', "'re ", 'paired', 'mix', 'well', 'come', 'together', 'kiss', '.', 'Best', ',', 'lip', 'balm', 'keeps', 'lips', 'prot ected', 'moisturized', '.', 'Wear', 'every', 'day', 'stay', 'kissable', '!']

['Nardo', "'s", 'Natural', 'line', 'premium-quality', 'organic', 'skin', 'care', 'products', 'proudly', 'made', 'USA', '.', 'Their', 'products', 'range', 'facial', 'care', ',', 'body', 'care', ',', 'make-up', ',', 'even', 'line', 'men', '.', 'Always', 'made', 'premium', 'materials', ',', "'ll", 'find', 'things', 'lik e', 'coconut', 'oil', ',', 'shea', 'butter', ',', 'bentonite', 'clay', ',', 'acai', 'berry', 'pomegranate', 'among', 'ingredients', '.', 'Just', 'important', 'wo', "n't", 'find', ':', 'Nardo', "'s", 'Natural', 'products', 'free', 'parabens', ',', 'dyes', ',', 'gluten', 'harsh', 'chemicals', '.', 'Nardo', "'s", 'Natural', 'offers', 'facial', 'cleansers', ',', 'anti-aging', 'creams', ',', 'make-up', ',', 'body', 'washes', ',',

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'exfoliants', ',', 'moisturizers', ',', 'even', 'shave', '.', 'The', 'company', 'also', 'offers', 'privat
e', 'label', 'contract', 'manufacturing', 'services', 'businesses', 'up-and-coming', 'cosmetics
', 'businesses', '.']
['Fashion-forward', 'edgy', 'jewelry', 'headpieces', ',', 'body', 'jewelry', ',', 'shoe', 'jewelry', '.
['Stand-up', 'paddle', 'boarding', 'products', '.']
['A', 'line', 'fully-protective', 'fashionable', 'safety', 'gear', 'people', 'ride', 'scooters', 'motorc
ycles', '.']
['NailPak', 'Duality', 'Cosmetics', 'portable', 'manicure', 'solution', 'touching', 'story', '.', 'A',
'mother', "'s", 'bonding', 'ritual', 'daughters', 'turned', 'commercial', 'success', ',', 'NailPak',
'came', 'evenings', 'together', 'spent', 'others', "'", 'nails', '.', 'They', 'came', 'NailPak', ',', 's
elf-contained', 'package', 'combines', 'nail', 'polish', 'polish', 'remover', 'along', 'pads', 'file'
 '.']
['Lollacup', 'one', 'well-engineered', 'sippy', 'cup', '.', 'It', 'comes', 'valve-free', ',', 'weighted'
, 'straw', 'small', 'children', 'easily', 'learn', 'drink', ',', 'even', 'Lollacup', 'tilted', '.', 'The', 'cu
p', 'also', 'handles', 'easy', 'gripping', ',', 'removable', 'case', 'Lollacup', 'needs', 'put', 'cuph
older', '.', 'Made', 'USA', ',', 'Lollacup', 'also', 'dishwasher', 'safe', 'made', 'materials', 'FDA
-approved', 'used', 'young', 'children', '.']
['An', 'online', 'store', 'customizable', 'bicycles', '.']
['A', 'fun', ',', 'all-inclusive', 'dance', 'workout', 'people', 'ages', ',', 'shapes', 'sizes', '.']
['Now', 'business', 'Wild', 'Friends', 'brand', ',', 'enterprising', 'college', 'students', 'went', 't
ank', 'wholesome', 'creatively', 'flavored', 'line', 'nut', 'butters', '.', 'Their', 'all-natural', 'nut',
'butters', 'come', 'delightful', 'flavor', 'combinations', 'honey', 'pretzel', ',', 'cinnamon', 'raisi
n', ',', 'sesame', 'cranberry', ',', 'chocolate', 'coconut', ',', 'vanilla', 'espresso', '.', 'Ca', "n't", '
decide', 'nut', 'butter', '?', 'Wild', 'Friends', 'offers', 'variety', 'packs', '.', 'Want', 'nut', 'butter
s', 'go', '?', 'They', 'come', 'travel-friendly', 'single', 'serve', 'sizes', '.', 'These', 'days', ',', 'Wi
ld', 'Friends', 'sells', 'peanut', 'butter', ',', 'almond', 'butter', ',', 'sunbutter', 'products', 'onlin
e', 'major', 'food', 'retailers', 'across', 'US', '.']
['Socially-conscious', ',', 'recyclable', 'sneakers', '.']
['UniKey', 'provides', 'smart', 'lock', 'system', 'called', 'Kevo', 'works', 'smartphones', 'speci
ally-made', 'Kevo', 'fob', '.']
['Non-toxic', 'bedbug', 'glue', 'traps', '.']
['A', 'belt', 'featuring', 'buckle', 'opens', 'make', 'beverage', 'holder', '.']
['Surf-inspired', 'exercise', 'equipment', 'group', 'fitness', 'classes', '.']
['A', 'patent-pending', 'strap', 'keeps', 'wearer', "'s", 'posture', 'perfect', '.']
['A', 'way', 'wear', 'healing', 'stones', 'around', 'wrist', 'make', 'fashion', 'statement', '.']
['Back', '9', 'Dips', 'buffalo', 'chicken', 'dips', 'created', 'white', 'meat', 'chicken', 'breasts', 'a
long', 'wing', 'dipping', 'sauces', '.']
['An', 'exoskeleton', 'device', 'gives', 'structure', 'plastic', 'zipper', 'bag', 'create', 'handy', 's
turdy', 'bowl', '.']
```

ted', '.']
['If', "n't", 'like', 'swallow', 'pills', ',', 'may', 'feel', 'like', "n't", 'wellness', 'supplements', '.', 'M arz', 'Sprays', 'came', 'solution', '.', 'Their', 'supplements', 'designed', 'packaged', 'oral', 's

['Pillowcase', 'dresses', 'grow', 'alongside', 'kids', ',', 'tied', 'ribbons', 'allow', 'height', 'adjus

prays', '.', 'Just', 'spritz', 'mouth', "'re", 'good', 'go', '.', 'Marz', 'Sprays', 'five', 'different', 'sprays', 'offer', ':', 'ReBoot', ',', 'Restorative', ',', 'C-Spray', ',', 'Slim', ',', 'Juicy', '.', 'C-Spray', 't op-seller', ',', 'blend', 'Vitamin', 'C', ',', 'Vitamin', 'B-12', ',', 'Vitamin', 'D', ',', 'Echinacea', 'in gredients', 'chosen', 'boost', 'immune', 'system', '.', 'There', 'Marz', 'Sprays', 'cover', 'anyth ing', 'might', 'want', 'supplement', '.', 'Sleep', 'Spray', 'helps', 'relax', 'restful', 'slumber', '.', 'ReBoot', 'wakes', 'caffeine', '.', 'Slim', 'formulated', 'help', 'weight', 'loss', '.', 'Meanwhile', ', ', 'Juicy', 'general', 'multi-vitamin', 'supplement', "'s", 'designed', 'take', 'small', ',', 'multiple', 'doses', 'throughout', 'day', '.']

['Protein-infused', 'flavored', 'water', '.']

['A', 'lobster', 'roll', 'food', 'truck', 'run', 'two', 'cousins', 'originally', 'Maine', ',', 'operating', 'Southern', 'California', '.']

['Focus', 'Designs', 'maker', 'self-balancing', 'unicycle', ',', 'SBU', 'short', '.', 'The', 'SBU', 'b attery-powered', 'unicycle', 'built-in', 'sensors', 'keep', 'rider', 'balanced', 'moving', 'forwar d', 'need', 'pedaling', '.', 'The', 'rider', 'controls', 'SBU', 'natural', 'leaning', 'motions', ',', 'acc ording', 'company', ',', 'takes', '20-30', 'minutes', 'learn', '.', 'The', 'SBU', 'strong', 'yet', 'ligh tweight', ',', 'supporting', '300', 'lbs', '.', 'mere', '27-pound', 'frame', 'accelerating', '10mph', '3', 'seconds', '.', 'The', 'SBU', 'reaches', 'max', 'speed', '12.5', 'mph', 'take', 'hills', '30', '%', 'grade', '.']

['A', 'plastic', 'lid', 'turn', 'plate', 'airtight', 'container', 'food', 'storage', '.']

['Cool', 'Wazoo', 'cover', 'redirects', 'heat', 'back', 'source', 'serving', 'five', 'different', 'funct ions', '.', 'It', 'swing', 'cover', ',', 'high', 'chair', 'cover', ',', 'shopping', 'cart', 'cover', ',', 'car', 'shade', 'changing', 'pad', '.']

['Ice', 'Chips', 'sugar-free', 'hard', 'candy', 'sweetened', 'Xylitol', 'smashed', 'bits', 'distinctive', '``', 'ice', 'chips', """, 'shape', '.', 'The', 'business', 'run', 'two', 'enterprising', 'friends', ',', 'Bev', 'Vines-Haines', 'Charlotte', 'Clary', ',', 'years', 'friendship', 'worked', 'tons', 'ideas', 'projects', 'finally', 'coming', 'across', 'Ice', 'Chips', '.', 'These', 'two', 'grandmothers', '37', 'grandchildren', 'wanted', 'make', 'candy', 'healthy', 'yet', 'tasted', 'good', 'enough', 'brood', 'would', 'like', '.']

['Costumes', 'instantaneously', 'transform', 'wearer', 'human', 'motorized', 'vehicle', '.']

['Caffeine-free', 'nutrition', 'shot', 'designed', 'tested', 'special', 'ops', 'forces', '.']

['A', 'company', 'rents', 'live', ',', 'potted', 'Christmas', 'trees', 'eco-friendly', 'good-spirited', 'alternative', 'cut', 'trees', '.']

['A', 'kid-friendly', 'cappuccino', 'bar', 'parents', 'children', 'enjoy', '.']

['Prepackaged', ',', 'peel-off', 'face', 'paint', 'wide', 'variety', 'designs', '.']

['Professional-quality', 'hair', 'care', 'products', 'children', 'without', 'harsh', 'chemicals', '.'] ['A', 'washer', 'dryer', 'bag', 'specifically', 'designed', 'protect', 'children', "'s", 'beloved', 'stu ffed', 'animals', 'damage', 'wash', '.']

['Urbio', 'innovative', 'modular', 'solution', 'urban', 'gardening', 'small', 'space', 'organizatio n', '.', 'Made', 'light-weight', 'durable', 'polypropylene', 'plastic', 'neodymium', 'magnets', ',', 'Urbio', 'recyclable', 'product', 'available', 'variety', 'vessel', 'sizes', '.']

['Coffee', 'Joulies', 'inventive', 'new', 'way', 'keep', 'coffee', 'ideal', 'temperature', 'hours', '.', 'Simply', 'drop', 'silver-colored', '``', 'beans', "''", 'coffee', 'absorb', 'heat', 'hot', ',', 'later', 'r elease', 'heat', 'drink', 'cools', '.', 'Coffee', 'Joulies', 'get', 'coffee', 'ready', 'drink', '(', 'withou t', 'burning', 'tongue', ')', 'sooner', 'keep', 'comfortably', 'hot', 'five', 'hours', '.', 'Coffee', 'Jou

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lies', 'use', 'non-toxic', 'proprietary', '``', 'phase', 'change', 'material', "''", 'encased', 'foods afe', 'stainless', 'steel', 'shells', '.', 'The', 'material', 'absorbs', 'heat', '140', 'degrees', 'Fahr enheit', 'releases', 'heat', 'threshold', '.', 'The', 'set', 'Coffee', 'Joulies', 'includes', 'five', 'Jo ulies', 'carrying', 'pouch', '.']
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['A', 'magnetic', ',', 'power-free', 'sound', 'amplifier', 'iPad', '.']

['Grinds', ',', 'Grinds', 'Coffee', 'Pouches', ',', 'small', 'pouches', 'flavored', 'coffee', '.', 'Grinds', 'tobacco-', 'nicotine-free', 'product', '.']

['A', 'pillowcase', 'built-in', 'hood', 'added', 'coziness', '.', 'Also', 'available', 'inflatable', 'trav el', 'pillow', '.']

['A', 'chain', 'quick-service', 'establishments', 'selling', 'quality', 'made-to-order', 'sushi', 'ro lls', '.']

['A', 'device', 'reducing', 'distrated', 'driving', 'behaviors', ',', 'Smartwheel', 'built', 'vehicle', "'s", 'steering', 'wheel', 'alerts', 'drivers', 'engage', 'unsafe', 'driving', 'positions', '.']

['Nuts', "'N", 'More', 'line', 'high-protein', 'nut', 'butters', ',', 'fortified', 'whey', 'isolate', 'protein', 'flaxseed', 'never', 'added', 'sugars', '.', 'Choose', 'peanut', 'butter', ',', 'almond', 'butter', ',', 'even', 'sesame', 'butter', ',', 'plain', 'blended', 'delicious', 'unexpected', 'flavor', 'combinations', ',', 'including', 'Toffee', 'Crunch', ',', 'Chocolate', ',', 'Pumpkin', 'Spice', '.', 'Each', 'serving', 'Nuts', "'N", 'More', 'butters', 'contains', '10g', 'protein', 'along', 'healthy', 'Omega-3', 'oils', ',', 'plenty', 'dietary', 'fiber', ',', 'low', 'amounts', 'net', 'carbs', '.', 'While', 'nut', 'butters', 'market', '--', 'even', 'savory', 'ones', '--', 'tend', 'sweetened', 'sugar', ',', 'Nuts', "'N", 'More', 'instead', 'adds', 'xylitol', '.']

['A', 'training', 'program', 'featuring', 'full-body', 'Rodeo', 'Abs', 'machine', 'software', 'pack age', 'calculates', 'ideal', 'heart', 'rate', 'working', 'efficiently', '.']

['A', 'versatile', 'comfortable', 'beanbag', 'chair', 'unzips', 'bed', '.']

['Drop', 'Stop', 'offers', '100', '%', 'coverage', 'dreaded', '``', 'carmuter', 'triangle', "''", ',', 'sp ace', 'car', 'belongings', 'stray', 'debris', 'go', 'disappear', '.', 'Of', 'course', ',', '``', 'carmuter', 'triangle', "''", 'refers', 'gap', 'seat', 'center', 'console', '.', 'The', 'patented', 'Drop', 'Stop', 'built-in', 'slot', 'attaches', 'seat', 'belt', 'catch', 'keeps', 'securely', 'place', ',', 'assuring', 'full', 'coverage', 'gap', 'even', 'move', 'seat', '.', 'Made', 'high', 'grade', 'neoprene', 'casing', ',', 'DropStop', 'expands', 'compresses', 'fit', 'according', 'shape', 'car', "'s", 'seats', 'center', 'console', ',', 'making', 'universal', 'fit', 'cars', 'trucks', '.']

['Coolwraps', 'offers', 'easier', 'frankly', ',', 'much', 'cooler', ',', 'way', 'get', 'presents', 'wrap ped', 'speedily', 'professionally', '.', 'Your', 'gift', 'goes', 'one', 'easy-to-use', 'shrink', 'wrap', 'bags', ',', 'shrink-seal', 'household', 'hair', 'dryer', '.', 'Available', 'three', 'patterns', '---', 'Ce lebration', ',', 'Balloons', ',', 'Hearts', '---', 'choose', 'one', 'best', 'suits', 'occasion', '.', 'Each', 'Coolwraps', 'package', 'contains', 'nine', 'shrink', 'wrap', 'gift', 'bags', 'three', 'size', ':', 'sm all', ',', 'medium', ',', 'large', '.', 'Coolwraps', 'come', 'handy', 'shape', 'gift', ',', "'s", 'especiall y', 'genius', 'comes', 'irregularly', 'shaped', 'presents', 'like', 'stuffed', 'animals', 'home', 'ac cessories', '.']

['Simple', 'Sugars', 'line', 'all-natural', 'skincare', 'products', 'sensitive', 'skin', '.', 'Made', 'y oung', 'entrepreneur', 'first-hand', 'experience', 'sensitive', 'skin', ',', 'Simple', 'Sugars', 'for mulated', 'sugar', 'primary', 'exfoliant', 'blended', 'noncomedogenic', 'oils', 'botanicals', 'm ake', 'effective', 'yet', 'gentle', 'products', 'anyone', 'safely', 'use', '.']

['A', 'cooler', 'built-in', 'LED', 'light', 'turns', 'lid', 'opened', ',', 'illuminating', 'contents', 'insid e', '.']

['A', 'water', 'bottle', 'built-in', 'filter', '.']

['Echo', 'Valley', 'Meats', 'retail', ',', 'online', 'gift', 'catalog', 'catering', 'company', 'quickly', 'becoming', 'household', 'name', '.', 'Premium', 'meats', ',', 'smoked', 'hams', ',', 'award', 'wi nning', 'sausages', 'make', 'personal', 'corporate', 'gift', 'giving', 'easy', 'full', 'flavor', '.'] ['The', 'Mission', 'Belt', 'no-holes', 'belt', 'instead', 'adjusts', 'using', 'innovated', 'ratchet', 's ystem', '.', 'Because', "'s", 'restricted', 'scarce', 'holes', ',', 'fitted', 'size', '.', 'The', 'ratchet', " 's", 'teeth', 'spaced', 'mere', 'fourths', 'inch', 'apart', '.', 'Mission', 'Belt', 'also', 'social', 'mission', ':', 'every', 'belt', 'contributes', 'dollar', 'towards', 'fighting', 'global', 'hunger', '.'] ['Shell', 'Bobbers', ':', 'fishing', 'bobbers', 'made', 'used', 'shotgun', 'shells', '.', 'If', 'hunting', 'fishing', 'enthusiast', 'life', ',', 'rest', 'assured', 'appreciate', 'idea', 'moment', 'see', '.', 'The se', 'Shell', 'Bobbers', 'novelty', 'item', ',', 'fully-functional', 'bobbers', 'float', 'upright', ',', 'w ell', 'water', 'line', ',', 'remain', 'visible', 'easy', 'spot', '.', 'Use', 'Shell', 'Bobbers', 'fishing', 'si tuation', 'enjoy', 'fact', "'re", 'giving', 'second', 'life', 'scrap', 'shot', 'gun', 'shells', 'would', 'ot herwise', 'cluttering', 'landfill', '.']

['Individually', 'packaged', 'cupcake-in-a-jar', ',', 'sold', 'retail', 'shipping', 'nationwide', '.'] ['A', 'subscription', 'service', 'delivering', 'assortment', 'coffees', 'at-home', 'brewing', '.'] ['A', 'fully-seasoned', 'gumbo', 'base', 'form', 'brick', '.']

['Spacious', 'photobooths', 'filled', 'props', '.']

['A', 'balance', 'bike', 'kids', 'work', 'riding', 'two-wheeled', 'bicycles', '.', 'Rather', 'using', 'tr aining', 'wheels', ',', 'KaZam', 'forgoes', 'pedals', 'encourages', 'kids', 'safely', 'practice', 'b alance', '.']

['Custom-built', 'heirloom', 'gaming', 'furniture', '.']

['Stella', 'Valle', 'produces', 'line', 'jewelry', 'embodies', 'inner', 'strength', 'self-reliance', '.', 'Founded', 'two', 'sisters', 'veterans', 'US', 'military', ',', 'designs', 'evoke', 'military', 'backg round', 'unique', 'aesthetic', 'sensibilities', '.', 'Balancing', 'masculine', 'feminine', 'design', 'elements', 'details', ',', 'jewelry', 'designed', 'brave', 'women', 'set', 'bar', 'high', 'persist', 'a dversity', '.']

['A', 'mobile', 'app', 'connects', 'users', 'professional', 'translators', 'demand', '.'] ['A', 'chain', 'grilled', 'cheese', 'tomato', 'soup', 'shops', '.']

['Now', 'business', 'Ry', "'s", 'Ruffery', ',', 'business', 'started', 'Ryan', "'s", 'family', 'adopte d', 'rescue', 'beagle', '.', 'The', 'family', 'taken', 'aback', 'poor', 'quality', 'dog', 'treats', 'mark et', ',', 'decided', 'make', 'better', 'dog', 'biscuit', '.', 'Ryan', ',', '10', 'years', 'old', ',', 'took', 'in itiative', 'talk', 'veterinarians', 'test', 'new', 'flavor', 'combinations', ',', 'experimenting', 'mo m', "'s", 'help', '.', 'Once', 'settled', 'recipe', ',', 'Ryan', 'took', 'streets', 'sell', 'doggie', 'treats', 'bike', '.', 'Today', ',', 'Ry', "'s", 'Ruffery', 'offers', 'three', 'different', 'flavors', ':', 'cheddar', ', 'peanut', 'butter', ',', 'pumpkin', 'apple', '.', 'These', 'healthy', 'dog', 'treats', 'sold', 'online', 'pet', 'stores', 'across', 'country', '.']

['Breathometer', 'makes', 'breathalyzer', 'tests', 'accessible', 'consumers', 'leveraging', 'us ers', "'", 'smartphones', '.', 'Easily', 'plugging', 'smartphone', "'s", 'audio', 'jack', ',', 'Breath ometer', 'makes', 'easier', 'ever', 'gauge', 'blood', 'alcohol', 'content', '.', 'The', 'user', 'simply', 'exhales', 'onto', 'sensor', 'results', 'displayed', 'onscreen', ',', 'much', 'like', 'using', 'bre

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athalyzer', '.', 'Breathometer', "'s", 'smartphone', 'app', 'also', 'estimates', 'long', 'user', 'm ay', 'able', 'drive', 'safely', ',', 'even', 'call', 'local', 'cab', 'needed', '.']
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['Kane', '&', 'Couture', 'sells', 'trendy', 'yet', 'affordable', 'accessories', 'stylish', 'pups', '.', 'For', 'stylish', 'dog', 'lovers', ',', 'Kane', '&', 'Couture', 'offers', 'doggie', 'apparel', ',', 'harnes ses', ',', 'collars', ',', 'leashes', ',', 'carriers', 'range', 'styles', ',', 'urban-chic', ',', 'sporty', ',', 'glam', '.', 'Even', 'doggie', 'poopie', 'bag', 'holder', 'attractively', 'styled', 'gray', 'denim', 'de cked', 'shiny', 'studs', '!', 'The', 'company', 'runs', 'three', 'brands', ':', 'The', 'Kane', '&', 'Co uture', 'Signature', 'line', ',', 'Bubba', 'Dog', 'Collection', ',', 'Imperial', 'Pup', '.']

['The', 'Freeloader', 'ultimate', 'child', 'carrier', 'active', 'families', ',', 'designed', 'ultra-light', ',', 'super', 'portable', 'extra', 'safe', 'strong', '.', 'This', 'child', 'carrier', 'supports', 'weight', ',', 'effectively', 'distributes', 'padded', 'contoured', 'shoulder', 'straps', 'padded', 'waist', 'strap', '.', 'The', 'Freeloader', 'also', 'designed', 'safety', 'mind', ',', 'featuring', 'five-point', 'har ness', 'system', 'hold', 'child', 'place', '.']

['RuffleButts', 'RuggedButts', 'collections', 'adorably', 'styled', 'super', 'soft', 'children', "'s", 'apparel', 'accessories', '.', 'This', 'husband', 'wife', 'founding', 'team', 'inspired', 'parentho od', 'desire', 'affordable', ',', 'stylish', 'well', 'made', 'clothing', 'accessories', 'toddlers', '.'] ['Garden', 'Pops', ',', 'Veggie', 'Mama', 'flagship', 'product', ',', 'natural', ',', 'frozen', 'vegeta ble', 'fruit', 'treats', '.']

['Ten', 'Thirty', 'One', 'Productions', 'entertainment', 'company', 'creates', ',', 'owns', ',', 'pr oduces', 'live', 'attractions', 'horror', 'genre', '.']

['Tree', 'T', 'Pee', 'agricultural', 'water', 'conservation', 'frost', 'protection', 'device', '.']
['Better', 'Life', 'produces', 'all-natural', 'cleaning', 'products', ',', 'including', 'all-purpose', 'cleaners', ',', 'specialty', 'surface', 'cleaners', ',', 'soaps', 'lotions', '.', 'The', 'company', "'s", 'mission', 'make', 'safest', 'effective', 'home', 'cleaning', 'products', 'market', '.', 'Better', 'Lif

e', 'cleaning', 'products', 'cruelty-free', 'made', 'USA', '.']

['Yubo', 'better', 'brighter', 'lunchbox', 'kids', 'parents', 'appreciate', '.', 'Children', 'love', 'int erchangeable', 'inserts', 'go', 'front', 'panel', ',', 'allows', 'change', 'look', 'lunchbox', 'pleas e', '.', 'Parents', 'love', "n't", 'buy', 'another', 'lunchbox', '!', 'Designed', 'maximum', 'style', 'cleanliness', ',', 'Yubo', 'also', 'easy', 'wipe', 'even', 'toss', 'dishwasher', '.']

['Pursecase', 'ultra-minimalist', 'purse', ',', 'built', 'room', 'phone', 'precious', 'essentials', ',', 'bit', 'cash', ',', 'ID', 'credit', 'card', 'two', '.', 'Not', 'skimp', 'style', ',', 'Pursecase', 'attractive', 'chain', 'handle', 'complete', 'purse-like', 'look', 'feel', '.']

['Bubba', "'s", 'Q', 'BBQ', 'proprietary', 'way', 'prepare', 'package', 'fully', 'cooked', ',', 'de-b oned', 'baby', 'back', 'ribs', '.', 'They', 'package', 'sale', ',', 'ready', 'enjoy', 'quick', 'blast', 'm icrowave', '.', 'Consumers', 'enjoy', 'fully', 'cooked', 'pork', 'ribs', 'knife', 'fork', 'kitchen', ',', 'speedily', 'anything', 'else', 'might', 'throw', 'microwave', '.', 'The', 'bones', 'hand-removed', 'packaged', 'ensuring', 'highest', 'quality', 'experience', '.', 'For', 'extra', 'flavor', ',', 'also', 'opt', 'cook', 'boneless', 'ribs', 'oven', 'grill', '.', 'Since', 'pre-cooked', ',', 'heat', 'quickly', ',', 'three', 'five', 'minutes', 'side', '.']

['A', 'Christmas', 'tree', 'topper', 'form', 'Star', 'David', ',', 'interfaith', 'families', 'fuse', 'holida ys', 'celebrate', 'together', '.']

['invisiPlug', 'makes', 'powerstrips', 'seamlessly', 'blend', 'hardwood', 'floors', '.', 'How', 'pass', 'unnoticed', 'power', 'strips', 'eyesores', '?', 'Simple', ',', 'invisiPlug', 'chameleon', 'amo

ng', 'power', 'strips', '.', 'They', 'literally', 'made', 'wood-colored', 'finishes', 'Medium', 'Cherry', 'Dark', 'Oak', ',', 'match', 'color', 'textures', 'actual', 'floor', '.']

['School', 'lockers', 'mess', ',', 'ca', "n't", '?', 'lt', "'s", 'anyone', "'s", 'fault', ',', "'s", 'plain', 'diff icult', 'keep', 'things', 'orderly', "'s", 'structure', '.', 'This', 'father-daughter', 'team', 'devised', 'solution', '.', 'LockerBones', 'shelves', 'locker', '.', 'This', 'unique', 'shelving', 'system', 'pi eces', 'fit', 'together', 'like', 'puzzle', ',', 'making', 'easy', 'assemble', 'resulting', 'sturdy', 'sh elves', 'keep', 'school', 'essentials', 'place', '.']

['Quality', 'baby', 'moccassins', '.']

['SwimZip', 'sun', 'protection', "'s", 'easy', 'put', ',', 'goes', 'long', 'way', "'re", 'dealing', 'toddl ers', '!', 'With', 'signature', 'zipper', 'front', ',', 'SwimZip', 'goes', 'zippy', 'jiffy', 'provide', 'am ple', 'sun', 'protection', 'babies', ',', 'toddlers', ',', 'fast-growing', 'big', 'kids', '.', 'This', 'sun-p rotective', 'clothing', 'also', 'designed', 'stylish', 'yet', 'affordable', ',', 'making', 'no-brainer', 'stay', 'sun-safe', '.']

['Southern', 'Culture', 'Foods', 'makes', 'flavored', 'pancake', 'waffle', 'mixes', 'breakfast', 'products', '.', 'As', 'company', ',', 'Souther', 'Culture', 'Foods', 'wants', 'change', 'people', 'think', 'breakfast', ',', 'stands', 'natural', 'breakfast', 'lifestyle', 'products', ',', 'including', 'sea soning', 'blend', 'bacon', 'called', 'Bacon', 'Rub', '.']

['A', 'safety', 'survival', 'course', 'developed', 'former', 'CIA', 'officer', '.']

['RevoLights', 'provides', 'ultimate', 'bicycle', 'lighting', 'system', 'safety', 'visibility', '.', 'The se', 'programmed', 'light', 'rings', 'attach', 'wheels', '.', 'RevoLights', 'illuminate', 'path', 'ah ead', 'rider', 'function', 'brake', 'lights', 'like', 'system', '.']

['Packback', 'rents', 'digital', 'textbooks', '\$', '5', 'less', 'allows', 'students', 'compare', 'price s', 'buying', 'selling', 'textbooks', '.']

['Chapul', 'manufactures', 'high-protein', 'flour', 'crickets', '.', 'That', "'s", 'right', ',', 'crickets', 'might', 'feed', 'pet', 'lizard', 'also', 'rich', 'cost-effective', 'source', 'protein', 'largely', 'overl ooked', 'undervalued', 'Americans', 'popular', 'many', 'Eastern', 'cultures', '.', 'Chapul', "'s", 'unique', 'cricket', 'flour', 'nutrition', 'bars', 'offer', 'gentle', 'appetizing', 'introduction', 'insects', 'Western', 'diet', '.']

['Happy', 'Feet', 'plushest', ',', 'softest', 'slippers', 'money', 'buy', '.', 'These', 'slippers', "n't", 'apologize', 'comfy', ',', 'flaunt', '.', 'Founded', '1995', ',', 'company', 'started', 'styles', 'yea rs', 'expanded', 'include', 'hundreds', 'designs', ',', 'including', 'many', 'association', 'branding', 'partners', '.']

['Hold', 'Your', 'Haunches', 'typical', 'shapewear', '.', 'It', "'s", 'made', 'hide', 'underneath', 'c lothes', ',', "'s", 'shapewear', 'built', 'clothes', '.', 'Hold', 'Your', 'Haunches', 'pants', 'tighten', 'legs', 'booties', 'also', 'nice', 'look', '!!, 'The', 'secret', 'Hold', 'Your', 'Haunches', 'unique', 'two-layer', 'design', ',', 'design', 'utility', 'patent-pending', '.', 'These', 'shapewear', 'fashion', 'pants', 'attractive', 'outer', 'shell', 'inner', 'compression', 'shell', 'sewn', 'waist', '.']

['A', 'unique', 'memorable', 'trackless', 'train', 'ride', 'entertains', 'children', 'shopping', 'mall s', '.']

['These', 'light', 'bulbs', 'smarts', '!', 'ilumi', 'makes', 'LED', 'light', 'bulbs', 'color-tunable', '.', 'They', 'screw', 'socket', 'like', 'normal', 'lightbulb', ',', 'controled', 'free', 'ilumi', 'smartphon e', 'app', '.', 'From', 'phone', ',', 'adjust', 'brightness', 'settings', 'colors', 'many', 'bulbs', 'ho me', '.', 'ilumi', 'light', 'bulbs', 'even', 'programmed', 'serve', 'sunrise', 'alarm', 'clocks', ',', 's ync', 'music', ',', 'fun', 'features', '.', 'As', 'added', 'benefit', ',', 'ilumi', "'s", 'LED', 'technology

', 'seven', 'times', 'energy', 'efficient', 'regular', 'light', 'bulbs', ',', 'also', 'durable', ',', 'lasting' , '20', 'years', '.']

['Rugged', 'Maniac', 'Obstacle', 'Race', 'organization', 'behind', 'national', 'serious', 'event s', 'take', 'regular', 'races', 'another', 'level', '.', 'Obstacles', 'ranging', 'towers', ',', 'water', 's lides', ',', 'fire', ',', 'tunnels', 'mud', ',', 'even', 'electrified', 'wires', 'litter', 'race', 'courses', '.', 'More', 'race', ',', 'Rugged', 'Maniac', 'events', 'always', 'capped', 'huge', 'celebration', '.', 'T oast', 'achievement', 'beer', ',', 'music', ',', 'dancing', ',', 'bounce', 'houses', '!']

['Love', 'outdoors', 'bummed', 'prospect', 'storing', 'enormous', 'clunky', 'kayaks', '?', 'Oru', 'Kayak', 'sells', 'light-weight', 'foldable', 'kayaks', 'made', 'space-age', 'materials', '.', 'The', 'company', 'uses', 'double-layered', 'polypropylene', ',', 'tough', ',', 'resilient', ',', 'abrasion -resistant', '.', 'The', 'original', 'Oru', 'Kayak', '12', 'feet', 'long', 'folds', 'box', 'measuring', '3 2x13x28', 'cubic', 'inches', ',', 'weighing', '26', 'pounds', '.']

['Not', 'typical', 'cinnamon', 'roll', 'shop', ',', 'Cinnaholic', 'treats', 'dairy-free', ',', 'lactose-free', ',', 'egg-free', ',', 'cholesterol-free', '100', '%', 'vegan', '.']

['Vice', 'meets', 'virtue', 'new', 'wine', 'spritzer', '.', 'Bon', 'Affair', 'blends', 'California', 'wine', 'purified', 'sparkling', 'water', ',', 'electrolytes', 'create', 'refreshing', 'effervescent', 'bever age', '6.5', '%', 'alcohol', 'volume', 'zero', 'added', 'sugar', '.', 'With', 'half', 'calorie', 'content ', 'regular', 'wine', ',', 'Bon', 'Affair', 'guilt-free', 'companion', 'beach', 'pool', '.', 'Bon', 'Affair', 'available', 'crisp', 'Sauvignon', 'Blanc', 'seductive', 'Syrah', '.']

['Origami', 'meets', 'home', 'storage', '.', 'A', 'collapsible', 'storage', 'box', 'designed', 'ease', 'use', '.', 'BZBox', 'pops', 'open', 'one', 'movement', ',', 'collapses', 'flat', 'easily', '.', 'BZBox', 'sturdier', 'versatile', 'typical', 'cardboard', 'box', '.']

['A', 'free', 'iPad', 'app', 'effortlessly', 'measures', 'child', "'s", 'feet', ',', 'connects', 'online', 'store', 'easily', 'find', 'shoes', 'fit', '.']

['A', 'sling', 'dog', 'carrier', 'tote', 'hybrid', ',', 'HeartPUP', 'allows', 'user', 'carry', 'pets', 'han dsfree', 'comfortably', 'making', 'fashion', 'statement', '.']

['Reviver', 'Clothing', 'Swipes', 'like', 'deodorant', 'clothes', '.', 'These', 'reusable', 'environ mentally-friendly', 'swipes', 'keep', 'clothes', 'smelling', 'fresh', 'washes', '.', 'Made', 'USA', ',', 'Reviver', 'swipes', 'perfect', 'solution', 'favorite', 'pieces', 'ca', "n't", 'tear', 'away', '.', 'By', 'potentially', 'prolonging', 'time', 'washes', ',', 'Reviver', 'also', 'encourage', 'efficient', 'con sumption', 'water', 'resources', 'laundry', '.']

['Novelty', 'eyewear', 'featuring', 'outrageous', 'unique', 'designs', 'transform', 'wearer', "'s", 'face', '.']

['The', 'Red', 'Dress', 'Boutique', 'online', 'retailer', 'affordable', 'fashions', 'young', 'women ', 'teens', '.', 'This', 'family-owned', 'business', 'retails', 'items', '\$', '50', 'goal', 'make', 'grea t', 'style', 'accessible', '.', 'You', "n't", 'rich', 'dress', 'well', 'feel', 'beautiful', '.', 'The', 'Red', 'Dress', 'Boutique', 'radiates', 'happiness', 'seeks', 'share', 'optimism', 'customers', '.', 'Fou nder', 'Diana', 'Harbour', 'started', 'giving', 'piece', 'sale', 'website', 'eye-catching', 'memor able', 'name', ',', 'focus', 'building', 'brand', "'s", 'image', 'tone', 'contributed', 'site', "'s", 'gro wth', 'success', '.']

['Honeyfund', 'gifting', 'platform', 'newlyweds', 'less', 'interested', 'acquiring', 'home', 'appli ances', 'funding', 'travel', 'dreams', '.', 'The', 'funding', 'duo', 'married', 'couple', 'used', 'we dding', 'registry', 'fund', 'honeymoon', 'plans', ',', 'developed', 'home-grown', 'system', 'so

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mething', 'anyone', 'could', 'sign', '.', 'As', 'company', ',', 'also', 'working', 'roll', 'additional', 'crowdgifting', 'platforms', 'occassions', ',', 'like', 'graduations', 'baby', 'showers', '.'] ['Inexpensive', 'creatively-flavored', 'box', 'wine', '.']
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['TITIN', 'patented', 'form-fitting', 'weighted', 'compression', 'gear', 'using', 'gel', 'weights', 'inserts', '.']

['Myself', 'Belts', 'little', 'ones', 'learning', 'things', '.', 'These', 'belts', 'fastened', 'unfastene d', 'quick', 'one-handed', 'motion', '.', 'These', 'velcro-backed', 'belts', 'great', 'kids', 'going', 'potty', 'training', 'special', 'needs', 'children', ',', 'faux', 'buckles', 'make', 'look', 'like', 'regu lar', 'belt', '.', 'Myself', 'Belts', 'adorably', 'styled', 'airplanes', ',', 'hearts', 'trucks', ',', 'even', 'customized', 'name', 'branded', 'design', ',', 'school', 'uniform', '.']

['Bottle', 'Breacher', 'takes', '50-caliber', 'ammunition', 'used', 'defend', 'country', 'nad', 'turns', 'bottle', 'openers', '.', 'Crafted', 'US', 'Active', 'Duty', 'service', 'members', 'Veterans', ', 'Bottle', 'Breacher', 'original', 'memorable', 'gift', '.', 'Use', 'promotional', 'gifts', ',', 'decorative', 'display', ',', 'course', ',', 'cracking', 'open', 'bottle', '!']

['The', 'Natural', 'Grip', 'makes', 'best-fitting', 'hand', 'grips', 'protecting', 'hands', 'workouts ', '.', 'Unlike', 'competition', ',', 'The', 'Natural', 'Grip', 'one-size-fits-all', 'product', '.', 'These', 'grips', 'created', 'fitness', 'enthusiast', 'active', 'duty', 'officer', 'Ashley', 'Drake', '.', 'The', 'Natural', 'Grip', 'provides', 'protection', 'torn', 'hands', 'blisters', 'without', 'bulk', 'alternative s', '.', 'Snugly', 'fitted', 'hand', ',', 'based', 'ring', 'finger', 'size', ',', 'Natural', 'Grip', 'hooks', 'ring', 'middle', 'fingers', 'drapes', 'palm', 'hands', '.']

['Heidi', 'Ho', '!', 'makes', 'line', 'delicious', 'cheezes', ',', 'typo', ',', 'ordinary', 'cheese', '.', 'C hef', 'Heidi', "'s", 'cheezes', 'purely', 'plant-based', ',', 'made', 'organic', 'vegetables', ',', 'nu ts', ',', 'seeds', '.', 'Despite', 'dairy-free', 'many', 'cases', 'also', 'soy-free', ',', 'Heidi', 'Ho', 'c heezes', 'maintain', 'cheese-like', 'properties', ',', 'firm', 'enough', 'grate', 'melty', 'like', 'rea l', 'cheese', '!']

['Pipcorn', 'fun', 'mini', 'popcorn', 'snack', '.', 'When', 'heated', 'popped', ',', 'popcorn', 'kern el', 'shells', 'shatter', 'little', 'pieces', ',', 'making', 'easier', 'stomach', 'teeth', ',', 'mention', 'd elicious', '.', 'This', 'brother-sister', 'duo', 'Brooklyn', 'makes', 'Pipcorn', 'small', 'batches', 'using', 'all-natural', 'ingredients', '.']

['The', 'Squatty', 'Potty', 'toilet', 'stool', 'helps', 'user', 'mimic', 'natural', 'squat', ',', 'allowing', 'easier', 'healthier', 'elimination', 'home', '.', 'Believe', ',', 'relatively', 'modern', 'tradition', 'sitting', 'upright', 'toilet', 'seat', 'improvement', ',', 'least', 'far', 'posture', 'concerned', '.', 'This', 'position', 'puts', 'stress', 'bowels', 'simple', 'squatt', '.', 'The', 'Squatty', 'Potty', 'allows', 'user', 'adapt', 'home', 'toilet', 'one', 'used', 'squatting', 'position', ',', 'helps', 'reduce', 'straining', 'even', 'prevent', 'hemorroids', 'bowel', 'herniation', '.', 'Squatty', 'Potty', 'also', 'great', 'kids', ',', 'gives', 'leg', 'place', 'rest', 'feet', 'moving', 'grown-ups', 'toilet', '.', 'When', 'use', ', 'Squatty', 'Potty', 'tucks', 'neatly', 'discretely', 'underneath', 'toilet', 'bowl', '.']

['Earthlogs', 'environmentally-conscious', 'choice', 'fire', 'logs', '.', 'Made', 'clean', 'waste', 'paper', 'scrap', 'candle', 'wax', ',', 'Earthlog', 'repurposes', 'waste', 'premium-quality', 'fire', 'products', '.', 'The', 'company', "'s", 'patent-pending', 'manufacturing', 'process', 'also', 'produces', 'zero', 'waste', '.']

['With', 'Magic', 'Cook', ',', 'users', 'make', 'meal', 'without', 'fire', ',', 'gas', 'electricity', '.']

['The', 'Kitchen', 'Safe', 'smart', 'container', 'helps', 'people', 'form', 'good', 'habits', '.', 'It', "'s", 'great', 'food', ',', 'cellphones', ',', 'TV', 'remotes', ',', 'video', 'games', ',', 'many', 'things', '.']

['Single-serve', 'wines', 'recyclable', ',', 'high', 'quality', 'plastic', 'stemware', 'looks', 'feels', 'like', 'glass', '.']

['Biaggi', 'luggage', 'built', 'premium', 'quality', 'easy', 'storage', '.', 'Their', 'unique', 'design', 'lightweight', 'construction', 'allow', 'Biaggi', 'baggage', 'flatten', 'storage', ',', 'greatly', 're ducing', 'space', 'required', '.', 'Biaggi', 'suitcases', 'also', 'feature', '4-wheel', 'spinner', 'sy stem', ',', 'padded', 'compartment', 'laptops', ',', 'hinge-lock', 'technology', ',', 'multi-stop', 't elescoping', 'aluminum', 'handles', '.']

['Fashionable', 'affordably-priced', 'apparel', 'female', 'sports', 'fans', '.']

['Hoppy', 'Paws', 'kit', 'includes', 'everything', 'needed', 'create', 'reindeer', 'hoof', 'prints', 'home', '.', 'An', 'easy', 'way', 'bring', 'whimsy', 'holidays', ',', 'Hoppy', 'Paws', 'comes', 'hoof ', 'print', 'stamp', ',', 'mixing', 'tray', 'super', 'secret', 'powder', '.', 'Mixed', 'water', ',', 'powde r', 'creates', 'crisp', 'white', 'hoof', 'prints', 'easy', 'clean', 'fun', 'done', '.', 'Hoppy', 'Paws', 'makes', 'look', 'like', 'reindeer', 'indeed', 'come', ',', 'company', 'expanded', 'kits', 'characte rs', ',', 'including', 'Santa', "'s", 'Elves', ',', 'Easter', 'Bunny', ',', 'Tooth', 'Fairy', '.', 'Non-toxic ', 'biodegradable', ',', 'Hoppy', 'Paws', 'works', 'hard', 'surfaces', ',', 'indoors', '.']

['An', '``', 'elf', 'shelf', "''", 'analog', 'Jewish', 'interfaith', 'families', '.', 'Moshe', 'Mensch', 'tell s', 'story', 'Hanukkah', 'promotes', 'values', 'Mensch', '.']

['The', 'Q-Flex', 'personal', 'acupressure', 'system', 'self-massage', 'device', '.', 'lts', 'hook-shaped', 'design', 'allows', 'anyone', 'reach', 'sore', 'spots', 'apply', 'pressure', 'relieve', 'stress', 'soothe', 'aches', '.', 'Lightweight', ',', 'durable', ',', 'easy', 'use', ',', 'affordable', ',', 'Q-Flex', 'allows', 'anyone', 'enjoy', 'on-demand', 'deep', 'tissue', 'massage', 'right', 'amount', 'pressure', 'relax', 'knotted', 'muscles', ',', 'ease', 'shoulder', 'tension', ',', 'relieve', 'back', 'pain', 'soothe', 'tired', 'feet', '.', 'Made', 'USA', '.']

['Bantam', "'s", 'mini', 'bagel', 'balls', 'come', 'stuffed', 'artisan', 'cream', 'cheeses', 'add', 'e ase', 'mobile', 'munching', 'perfect', 'snack', ',', 'meeting', 'event', '.']

['Doorman', 'on-demand', 'mobile', 'service', 'provides', 'package', 'delivery', '(', 'returns', ') ', 'midnight', ',', '7', 'days', 'week', '.']

['Scratch', '&', 'Grain', 'Baking', 'Co.', 'makes', 'wholesome', 'delicious', 'cookie', 'mixes', 'p lanet', '.', 'These', 'cookie', 'kits', 'bring', 'together', 'best', 'elements', 'baking', 'scratch', 'co nvenience', 'using', 'prepackaged', 'mixes', '.', 'Unlike', 'typical', 'baking', 'mixes', 'big', 'bra nds', 'might', 'used', 'seeing', 'grocery', 'store', ',', 'ingredient', 'Scratch', 'Grain', 'Co.', 'mix es', 'come', 'individually', 'packaged', 'within', 'box', '.', 'You', 'get', 'wonderful', 'flavor', 'ba ked-from-scratch', 'cookies', 'satisfaction', 'ingredients', 'fresh', 'all-natural', '.', 'Scratch', 'Grain', 'Co.', 'offers', 'number', 'different', 'cookie', 'mixes', ',', 'including', 'Chocolate', 'Chi p', ',', 'Sugar', 'Cookie', ',', 'Oatmeal', 'Raisin', '.', 'They', 'also', 'introduced', 'three', 'gluten-free', 'mixes', ':', 'Chocolate', 'Truffle', ',', 'Snicker', 'Doodle', ',', 'Chewy', 'Peanut', 'Butter', '.'.'

['Any', 'gathering', 'improved', 'reusable', 'sticky', 'ties', '!', 'Not', 'typical', '``', 'Hello', 'name', """, 'tag', ',', 'stickers', """, 'charming', 'look', 'themed', 'designs', 'offer', 'much', 'interestin g', 'kind', 'conversation', 'starter', '.', 'They', 'also', 'super', 'durable', '.', 'You', 'reposition', 'reuse', 'please', '.', 'They', "n't", 'even', 'leave', 'residue', "'re", 'gone', '.', 'You', 'write', 'stic

kers', ',', 'let', 'looks', 'speak', '.', 'The', 'company', 'started', 'making', 'sticky', 'ties', ',', 'cont inued', 'adding', 'new', 'shapes', 'themes', 'line-up', '.', 'Our', 'personal', 'favorite', 'bow', 'ties', '.', 'Try', 'next', 'party', 'see', 'liven', 'even', 'plain', 'white', 'tee', '.']

['A', 'premium', ',', 'nutritious', 'to-go', 'meal', 'dog', '.', 'The', 'official', 'dog', 'food', 'National ', 'Association', 'Search', 'Rescue', '.']

['A', 'unique', 'elegant', 'portable', 'lighting', 'solution', '.']

['GreenBox', 'innovator', 'behind', 'patented', ',', 'multi-functional', 'GreenBox', 'pizza', 'box ', '.', 'Made', '100', '%', 'recycled', 'recyclable', 'material', ',', 'GreenBox', 'breaks', 'plates', 'storage', 'unit', 'leftovers', ',', 'completely', 'eliminating', 'need', 'serving', 'plates', 'wasteful', 'storage', 'materials', '.']

['If', "'re", 'like', 'people', ',', 'hardly', 'function', 'without', 'smartphone', '.', 'It', 'goes', 'every where', 'go', 'use', 'repeatedly', 'throughout', 'day', '.', 'But', 'unlike', 'things', 'get', 'daily', 'w ear', 'tear', ',', 'probably', "n't", 'wash', 'phone', ',', "'s", 'accumulating', 'germs', 'since', 'day ', 'acquired', '.', 'Now', 'thanks', 'PhoneSoap', ',', "easy', 'highly', 'effective', 'way', 'zap', 'microbes', 'phone', '.', 'PhoneSoap', 'charger', 'smartphone', 'encloses', 'UV', 'case', ',', 'emits', 'light', 'UV-C', 'range', 'kills', '99.99', '%', 'bacteria', '.', 'It', 'disinfects', 'phone', '5', 'minutes', ',', "'s", 'also', 'safe', 'leave', 'night', 'charges', '.', 'You', "'ll", 'still', 'able', 'hear', 'n otifications', 'built-in', 'audio', 'amplifier', '.', 'One', 'advantages', 'PhoneSoap', 'charger', 'p roducts', ',', 'anti-bacterial', 'wipes', 'wireless', 'devices', ',', "'s", 'one-time', 'investment', '.', 'You', "'ll", 'able', 'use', 'charger', 'without', 'reorder', 'spend', 'money', '.', 'You', 'also', 'wo', "n't", 'even', 'need', 'remember', 'wipe', 'phone', ',', 'since', "'ll", 'charging', 'either', 'way', '.', 'Although', 'germicidal', 'phone', 'charger', 'company', "'s", 'flagship', 'product', ',', 'well', 'first', ',', "'ve", 'also', 'added', 'cleaning', 'pads', 'touchscreen', 'polish', 'stick', 'lineup', '.'] ['Drain', 'Strain', 'revolutionary', ',', 'never-clog', 'drain', 'stopper', '.']

['A', 'stylish', 'eco-friendly', 'alternative', 'pee', 'pads', ',', 'Fresh', 'Patch', 'delivers', 'real-gr ass', 'turf', 'dogs', "n't", 'backyards', '.']

['Funbites', 'curved', 'blade', 'cutter', 'makes', 'snap', 'cut', 'kids', "'", 'meals', 'bite-size', 'pi eces', '.', 'With', 'Funbites', 'transform', 'boring', 'food', 'fun', 'approachable', 'bites', '.', 'Gre at', 'encouraging', 'picky', 'eaters', 'try', 'new', 'things', ',', 'Funbites', 'available', 'assortme nt', 'geometric', 'shapes', '.', 'All', 'Funbites', 'cutters', 'work', 'simple', 'way', '.', 'By', 'fitting', 'cutter', 'food', 'item', 'pressing', ',', 'quickly', 'get', 'lots', 'neatly', 'evenly', 'cut', 'bites', 'foo d', 'ready', 'go', '.', 'Funbites', 'BPA-free', ',', 'dishwasher-safe', ',', 'proudly', 'made', 'USA', '.']

['The', 'BevBoy', 'best', 'companion', 'anyone', 'likes', 'relax', 'floating', 'water', '.', 'It', "'s", 'i ngeniously', 'devised', 'hold', 'drink', 'alongside', 'without', 'spilling', 'tipping', '.', 'Superior', 'accident-prone', 'cupholders', 'built', 'pool', 'floates', ',', 'BevBoy', 'floats', 'independently', 'maintains', 'balance', 'using', 'clever', 'weighted', 'balance', 'system', '.']

['The', 'Gold', 'Rush', 'Nugget', 'Bucket', 'makes', 'gold', 'gem', 'prospecting', 'made', 'easy ', 'fun', '.']

['Boobypack', 'sports', 'bra/crop-top', 'zipper-enclosed', ',', 'water-resistant', 'pockets', 'eit her', 'side', '.', 'This', 'fannypack', 'rack', 'keeps', 'valuables', 'safe', 'dance', ',', 'jog', 'fist', 'pump', 'ease', '.']

['Scholly', 'mobile', 'web', 'app', 'gives', 'high', 'school', 'students', ',', 'current', 'college', 'st udents', ',', 'graduate', 'students', 'fast', 'simple', 'way', 'find', 'scholarships', 'pay', 'college', '.']

['LuminAID', 'solar-powered', 'inflatable', 'light', 'developed', 'two', 'architecture', 'students', '2010', 'Haiti', 'Earthquake', '.']

['Frill', 'Clothing', 'designs', 'sorority', 'recruitment', 'clothing', 'donates', 'portion', 'sorority', "'s", 'proceeds', 'charity', 'choice', '.']

['Coco', 'Jack', 'tool', 'safely', 'easily', 'open', 'young', 'Thai', 'coconuts', ',', 'matter', 'size', 'strength', '.', 'The', 'company', 'offers', 'whole', 'suite', 'tools', 'make', 'young', 'Thai', 'coconuts', 'accessible', 'consumers', '.']

['EmazingLights', 'pioneering', 'new', 'Gloving', 'Movement', 'skillful', 'expression', 'art', ',', 'along', 'iHeartRaves', ',', 'provides', 'wildly', 'unique', 'festival', 'fashion', 'Raves', ',', 'Festivals', 'Beyond', '.']

['AquaVault', 'portable', 'outdoor', 'safe', 'keep', 'valuables', 'dry', 'beach', 'great', 'outdoor s', 'general', '.', 'The', 'AquaVault', 'attaches', 'lounge', 'chairs', ',', 'baby', 'strollers', ',', 'golf ', 'carts', ',', 'bikes', ',', 'boats', '.']

['Echo', 'Valley', 'Meats', 'retail', ',', 'online', 'gift', 'catalog', 'catering', 'company', 'quickly', 'becoming', 'household', 'name', '.', 'Premium', 'meats', ',', 'smoked', 'hams', ',', 'award', 'winning', 'sausages', 'make', 'personal', 'corporate', 'gift', 'giving', 'easy', 'full', 'flavor', '.'] ['BeeSweet', 'Lemonade', 'uses', 'locally', 'sourced', 'honey', '.', 'A', 'percentage', 'profits', '

form', 'sale', 'lemonade', 'goes', 'local', 'international', 'organizations', 'fighting', 'save', 'be es', '.']

['A', 'baby', 'toy', 'helps', 'retrieve', 'dropped', 'pacifiers', 'without', 'help', '.']

['Flavored', 'face', 'wipes', 'sweetened', 'stevia', '.', 'Makes', 'cleaning', 'kids', "'", 'faces', 'e asier', 'wo', "n't", 'avoid', 'thanks', 'sweet', 'flavor', '.']

['Faster', ',', 'safer', ',', 'ergonomically', 'correct', 'cost-effective', 'connectors', 'electric', 'power', '.']

['An', 'environmentally-friendly', 'alternative', 'peat', 'moss', 'made', 'recycled', 'paper', 'pro prietary', 'mix', 'organic', 'additives', '.', 'Using', 'PittMoss', 'instead', 'peat', 'eliminates', 'ne ed', 'chemical', 'additives', 'controls', 'pH', 'imbalances', ',', 'insects', ',', 'molds', 'weed', 'se eds', ',', 'releases', 'far', 'less', 'CO2', 'atmosphere', '.']

['ZinePak', 'partners', 'world', "'s", 'top', 'brands', ',', 'entertainers', ',', 'properties', 'make', 'i rresistible', 'content', 'activate', 'SuperFans', '.']

['Ultra-thin', 'insoles', 'add', 'protection', 'without', 'affecting', 'fit', 'shoes', 'sneakers', '.'] ['Started', '2011', 'three-time', 'world', 'record', 'Striped', 'Bass', 'angler', 'Greg', 'Myerson', ',', 'World', 'Record', 'Striper', 'Company', 'manufacturers', 'sells', 'science-based', 'fishin g', 'tackle', 'Myerson', 'used', 'land', 'monster', 'fish', '.', 'The', 'company', 'sells', 'sinkers', ', ', 'floats', ',', 'jigs', 'bucktails', 'incorporate', 'Myerson', "'s", 'patent-pending', 'Rattle', 'soun d', 'attracts', 'big', 'fish', 'variety', 'species', 'mimicking', 'sound', 'one', 'favorite', 'foods', ':', 'crustaceans', '.']

['Zero', 'Pollution', 'Motors', 'launching', 'urban', 'car', 'future', ',', 'AIRPod', '.', 'The', 'AIRPod', '.', 'with', 'solution', 'urban', 'pollution', 'urban', 'mobility', '.', 'With', 'small', 'size', ',', 'tin y', 'price', ',', 'zero', 'pollution', ',', 'fun', 'futuristic', 'design', ',', 'AIRPod', 'marks', 'turning', '

point', 'range', 'urban', 'vehicles', '.', 'It', 'real', 'breath', 'fresh', 'air', 'cities', 'prelude', 'travel ', 'without', 'pollution', '.']

['You', 'action', 'figure', ',', 'You', 'Kick', 'Ass', 'make', 'happen', '!', 'With', 'photo', 'friend', ',', 'You', 'Kick', 'Ass', 'makes', '3D-printed', 'action', 'figure', ',', 'even', 'give', 'action', 'hero', 'name', 'super', 'power', '.']

['SynDaver', 'Labs', 'makes', 'synthetic', 'body', 'parts', 'use', 'medical', 'education', ',', 'rep lace', 'use', 'cadavers', ',', 'live', 'animals', ',', 'human', 'patients', 'surgical', 'training', '.', 'SynDaver', "'s", 'models', 'highly', 'sophisticated', 'realistic', ',', 'flagship', 'product', ',', 'SynDaver', 'Synthetic', 'Human', 'surgical', 'simulator', '.', 'The', 'Synthetic', 'Human', 'bleeds', ',', 'breathes', ',', 'features', 'hundreds', 'replaceable', 'muscles', ',', 'bones', ',', 'or gans', ',', 'body', 'parts', '.']

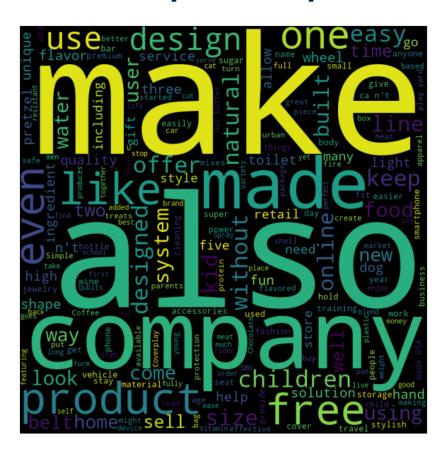
['Zoom', 'Interiors', 'virtual', 'service', 'interior', 'design', 'delivers', 'personalized', 'style', 'a ccessible', 'price', 'points', '.', 'Users', 'fill', 'survey', 'give', 'Zoom', 'sense', 'style', ',', 'follow ', 'free', '15-minute', 'telephone', 'consultation', '.', 'For', '\$', '150', ',', 'customers', 'get', 'roo m', 'designed', 'budgets', 'starting', 'low', '\$', '1,000', '.']

['Spikeball', 'started', 'casual', 'outdoors', 'game', ',', 'grown', 'become', 'national', 'sensati on', '.', 'Played', '2', 'vs.', '2', 'format', ',', 'teams', 'compete', 'spike', 'ball', 'bouncy', 'net', 'o ne', 'team', 'ca', "n't", 'return', ',', 'awards', 'opposing', 'team', 'point', '.', 'This', 'nascent', 's port', 'often', 'described', 'cross', 'beach', 'volleyball', 'foursquare', '.', 'Spikeball', "'s", 'pop ularity', 'growing', ',', 'currently', 'quarter', 'million', 'players', 'United', 'States', ',', 'well', 'tho usand', 'nationally', 'ranked', 'teams', '.']

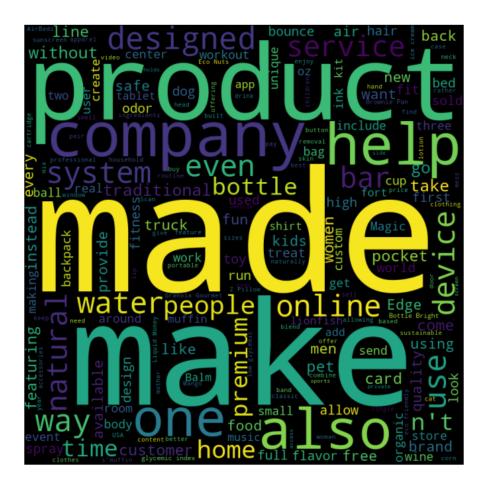
['Shark', 'Wheel', 'literally', 'reinvent', 'wheel', '.', 'Their', 'innovative', 'wheel', 'design', 'circ ular', ',', "is", 'Q-shaped', ',', 'put', 'simply', 'possible', '.', 'This', 'shape', 'may', 'look', 'funny', ',', 'makes', 'wheels', 'faster', 'gives', 'better', 'grip', '.', 'Over', 'uneven', 'terrain', ',', 'also', 'makes', 'smoother', 'ride', '.', 'The', 'team', 'put', 'Shark', 'Wheel', 'skateboards', ',', 'strolle rs', ',', 'wagons', ',', 'see', 'countless', 'possibilities', '.', 'The', 'flagship', 'product', 'currently', 'production', 'skateboard', 'wheels', ',', 'selling', 'online', '.']

['Sway', 'Motorsports', 'makes', 'three-wheeled', ',', 'all-electric', ',', 'street', 'legal', 'ride', '.', 'It', "'s", 'like', 'motorcycles', 'scooters', 'market', 'control', 'mechanism', '.', 'Affording', 'rid ers', 'slightly', 'wider', 'footprint', 'ability', 'control', 'tilt', 'vehicle', 'legs', ',', 'Sway', 'vehicles', 'offer', 'greater', 'stability', 'tighter', 'turns', '.', 'Riders', "n't", 'struggle', 'balance', 'vehicle', 'put', 'foot', 'stops', ',', 'reason', ',', "is", 'also', 'easier', 'carry', 'passenger', 'baggage', 'Sway', 'vehicles', '.']

[('.', 326), (',', 268), ('A', 55)] [('.', 470), (',', 443), ("'s", 69)] #word cloud true [Secured a deal]



#word cloud false [Did not secure a deal]:



#Q4: Refer to both the word clouds. What do you infer?

The 'secured a deal' word cloud contains words such as 'one', 'design', 'free', 'children', 'offer', 'easy', 'online',' use'. These indicate that Deals aimed towards catering to the children, which provided offers or a free sample/product, was easy to use, had a good design and was unique in its creativity are more likely to secure a deal.

The 'Did not secure a deal' word cloud contains words such as 'one', 'designed', 'help',' device', 'bottle', 'premium', 'use'. These indicate that Deals with a mediocre design, less suited to solve/help a problem, products involving water bottles, having a higher and pre mium price tag and less usability are less likely to secure a deal.

It is also observed that words such as 'one', 'designed', 'system' and 'use' have a higher weight in both these wordclouds. This indicates that either these were not the defining fa ctors to whether a deal is made or not or might have been used in a different context in the description in each scenario.

Q5.Looking at the word clouds, is it true that the entrepreneurs who introduced devices are less likely to secure a deal based on your analysis?

The word 'device' is not easily found in the 'secured a deal' word cloud while it is easily spotted in the 'not secured a deal' word cloud. This indicates that the word 'device' occu rred frequently when a deal was rejected hence implying the statement given in the que stion is true.