Counter Terrorism using Density Based Clustering and Naive Bayes Classification

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Abstract

The most important global issues currently are pollution, unemployment, corruption, drugs, terrorism and climate change. Terrorism is a serious issue throughout the world causing fear, anxiety, insecurity, violence and death among innocent people. This makes national security an important issue and steps need to be taken to combat terrorism. It is further used as a tool for a political cause. In this analysis, Density-Based clustering is used to obtain clusters through Rapid Miner tool. The clusters are used to find patterns of terrorist attacks in India and inferences from these attacks. Naive Bayes Classification is also used to predict probable attacks in the future.

1 Introduction

Terrorism, today, is one of the main threats to international peace and security. Al-Qaida, Haram and other terror groups have their own ideology and indulge in barbaric attack as per the report collected from the article published in the website Top 10 current global issues. As per the map (Refer Fig 1) shown below terrorism is spread worldwide. In particular, countries like India, Pakistan and Afghanistan fall in the danger zone as per the report collected from the article published in the website Our World In Data

2 Literature Survey

Several research work have been done on terrorism using data mining techniques. Ali, G. A. (2016) used data mining to understand Terrorist affiliations through social network. Classification of criminal data was done through decision tree by Sakhare Joshi (2014) and ensemble classifier was used by Sivaraman, R., S. et al (2015). Young, J. K., Findley, M. G. (2011) had done research work on terrorism pitfalls, Counter-terrorism by

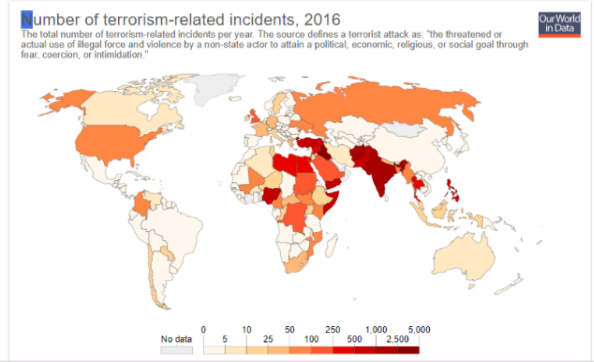

Figure 1: World Map showing Terrorism related incidents in 2016

Heath-Kelly, C. (2013). The other techniques like clustering by Gupta, P et al(2018), big data and hadoop(Strang, K. D., Sun, Z. (2017) are used for the study of terrorism.

2.1 Need of Data Mining

Data mining can be defined as a technique that helps extract useful knowledge from a large amount of data and analyse it to find patterns in the data. It involves the preprocessing steps like Data Cleaning, Integration, Selection and Data Transformation/ Reduction. The various data mining techniques are Clustering, Association, Classification, Outlier Analysis and Prediction. Data Mining Techniques have applications in areas like education, health care and environmental analysis, fraud detection and crime analysis etc. These techniques help analyse and determine the new trends and unknown patterns of the data. Clustering techniques are used to find the targeted groups, days attacked etc. Data Mining for counter terrorism can be categorized as real time or non real time threats. Classification algorithms like Decision Tree and Naive Bayes can be used to get models to predict probable attacks.

2.2 Clustering analysis

Clustering algorithms are used to partition a dataset into homogeneous groups based on features considered for analysis .The similar objects are grouped together whereas dissimilar objects are in different groups. The algorithm is chosen based on the features like scalability, ability to handle noisy data, deal with data set of high dimensionality, arbitrary-shaped clusters etc. The various clustering techniques are K-means, K-medoid, FCM, PAM, CLARANS, DBSCAN, CURE and ROCK etc (Han Kamber 2011). Clustering Algorithms can be broadly classified as Unsupervised linear clustering algorithm, Fuzzy C-Means, Gaussian(EM) clustering, Hierarchical(AGNES DIANA) and Unsupervised nonlinear clustering algorithms such as Partitioned based algorithms such as K-Means, Density based clustering algorithms like Density-Based Spatial Clustering of Applications with Noise(DBSCAN) and Ordering points to identify the clustering structure (OPTICS).

2.3 Density based Clustering Algorithm

DBSCAN is the most widely used density based algorithm as it uses the concept of density reachability and density connectivity. The two parameters used are Epsilon(Eps) and Minimum points(MinPts). Density is the number of points within a specified radius Eps and Minimum number of points within the specified distance (MinPts). **DBScan does not require us to know the number of clusters in the data.** The algorithm is shown in Fig 2.

OPTICS, a generalization of DBSCAN, is also used for density based clustering. The salient features of DBSCAN are as follows:

- It does not require to specify the number of clusters in the data in contrast to K-Means where the value of K has to be determined before the start of the algorithm.
- It leads to the formation of arbitrary-shaped clusters.
- It deals with different attribute types and data of high dimensionality.
- It is insensitive to noise and outliers.
- The result obtained is interpretable and usable.

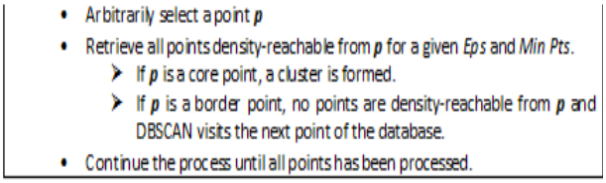

Figure 2: DBSCAN Algorithm

Table 1: Metadata about Global Terrorism

Data Set Information	
File Name	Global Terrorism database (july 2018 released)
Year	1970-2017
Total no. of attributes	135
Attributes	Eventid, Year,Month ,Country, Region attacked , group name etc
Number of Instances	1,81,692 records
Scope(Region)	India
Attributes considered for analysis	Date, Year, Provstate ,City Group name, Type of Attack ,Latitude etc
Number of instances for Analysis	11,500record (approximately)
Url	Click to open Data Set

3 Data Resources

3.1 Data Collection/ Metadata

The data set was downloaded from the kaggle.com website. There were 1,81,692 records initially consisting of countries all over the world. The metadata is shown in Table 1.

3.2 Data Set

The Figure given in Appendix shows a Screenshot of dataset considered (Refer Figure 23)

4 Methodology

Tool Used - **Rapid Miner**

The steps of the methodology are as follows-

a. Data Preprocessing (Data Cleaning, Data Selection and Data Normalisation)

b. Pilot study to understand clusters using K-Mean

c. Clustering using DBSCAN

K-Mean clustering Algorithm:-

Given *k*, the *k-means* algorithm is implemented in four steps (Han 2006)

1. Partition objects into *k* nonempty subsets
2. Compute seed points as the centroids of the clusters of the current partition (the centroid is the center, i.e., *mean point*, of the cluster)
3. Assign each object to the cluster with the nearest seed point
4. Go back to Step 2, stop when no more new assignment

It uses a min sum of squared distance calculated using the formula:-

Figure 3: K-Means Algorithm

Davies-Bouldin index index for K=3, 4,5,6,7,8

k	3	4	5	6	7	8
Davies Bouldin:	0.452	0.271	0.06	0.199	0.315	0.396

Figure 4: Calculation of value of K

d. Cluster model analysis and Inference is obtained

e. Naive Bayes classification technique to predict probable place of attacks

4.1 Pilot study : K-Mean Clustering Algorithm

Cluster analysis focuses on the object collections and the class labels are unknown initially. Distance measures (Manhattan, Euclidean) and non-Euclidean distance measures (Jacquard, Cosine) are used to find the distance between points. In this case study K-Means partitioned based clustering technique is used. One of the advantages of the K-Means approach over other techniques is that it is a well established technique various applications. It can also be used on large datasets. The figure represents K-Means Algorithm (Refer Figure 3).

The Cluster Distance Performance operator of Rapid Miner is used to find out Davies-Bouldin index. This performance measures (DB-Index) are used to identify the appropriate value of K in K-Means algorithm. The figures (Refer Fig 4,5,6,7,8) shows the cluster model and scatter plot of cluster obtained.

4.1.1 Inference of K-Means

5 spherical clusters were obtained with all the points were grouped within them. The outliers were also stored within the clusters.

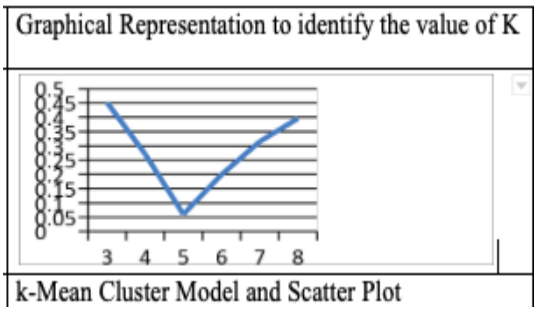

Figure 5: Graph for Value of K

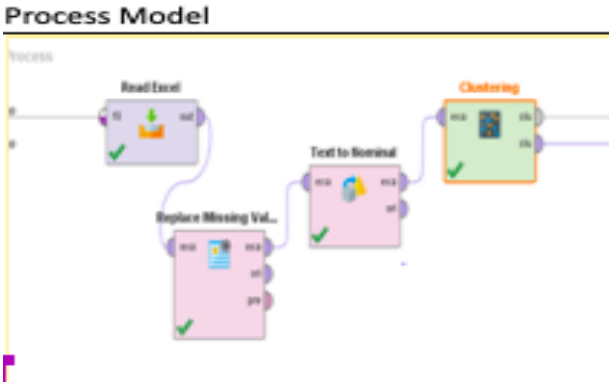

Figure 6: Process Method for K-Means

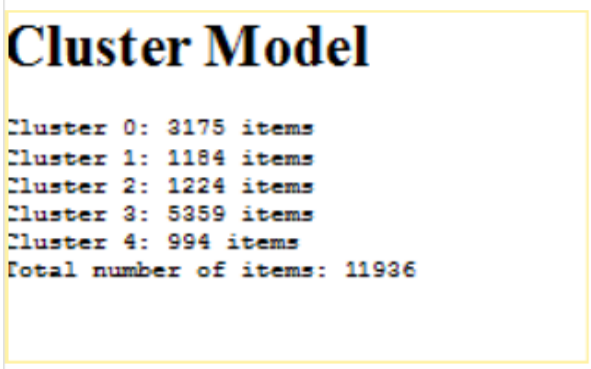

Figure 7: Cluster Model for K-Means 1

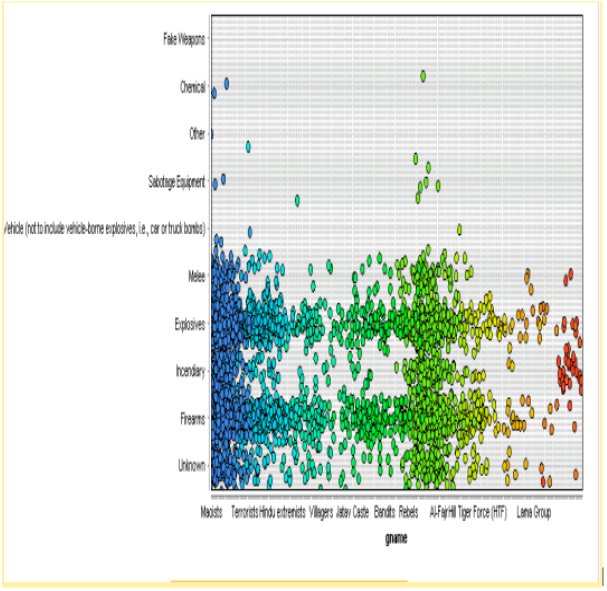

Figure 8: Cluster Model for K-Means 2

```
> library(readxl)
> dbscan_data <-
read_excel("C:/Users/Desktop/globalterrorismdb_0718dist.csv
(1)/globalterrorismdb_0718dist.csv (original)/dbscan data.xlsx")
> View(dbscan_data)
 terror <- as.matrix(dbscan_data[,1:8])
kNNdist(terror, k=4, search="kd")
 cl <- dbscan(terror, eps = .5, minPts = 25)
pairs(terror, col = cl$cluster+1L)
kNNdistplot(dbscan_data, k=20)
```

Figure 9: Graph for Calculation of Eps using R

4.2 Density Based Clustering analysis (DBSCAN)

4.2.1 Identify the value of epsilon and min points

Tool Used - **R**

DBSCAN take Radius of Clusters (Eps) and Minimum Points (min points within radius Eps) as input parameters. The process followed by us is fixing the value of minimum points according to domain knowledge and calculating the value of Eps by forming the kk-distance graph using R. The minimum points was fixed to 25 and the epsilon value obtained was 1. The process can be seen in Figures 9, 10, 11, 12. The scatter plots are shown in Figures 13, 14 and 15 depicting clusters w.r.t date, month, year, latitude and longitude

4.2.2 Inference of DBSCAN

The clusters were analysed as follows -

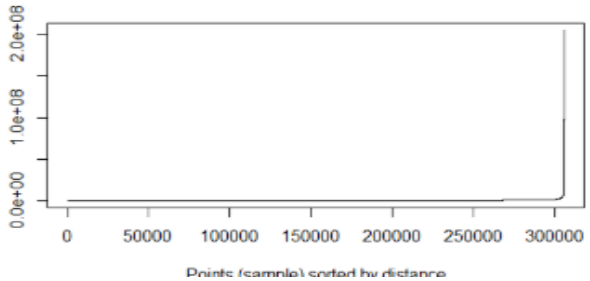

Figure 10: Code for Calculation of Eps using R

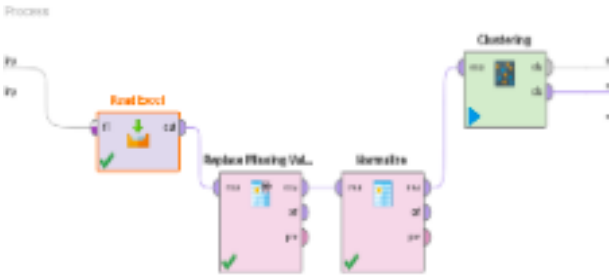

Figure 11: Process Method for DBSCAN

Cluster Model

Cluster 0: 1867 items
Cluster 1: 6799 items
Cluster 2: 203 items
Cluster 3: 193 items
Cluster 4: 49 items
Cluster 5: 1017 items
Cluster 6: 34 items
Cluster 7: 33 items
Cluster 8: 706 items
Cluster 9: 665 items
Cluster 10: 27 items
Cluster 11: 159 items
Cluster 12: 26 items
Total number of items: 11778

Figure 12: Cluster Model for DBSCAN

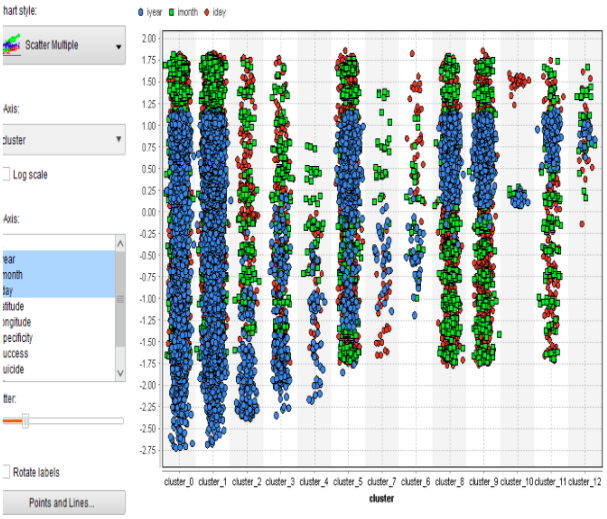

Figure 13: Scatter Plot 1

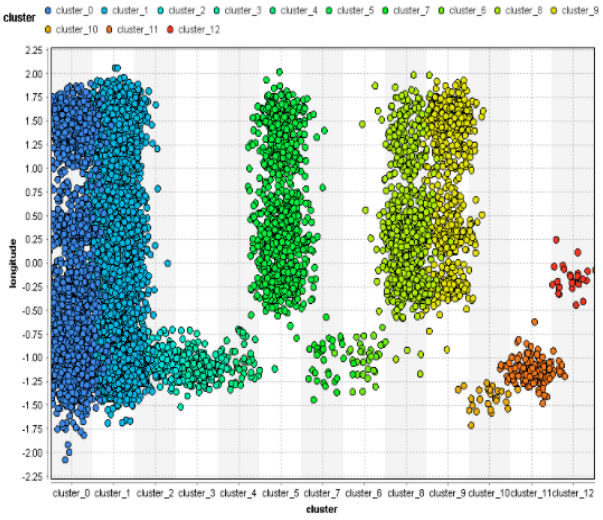

Figure 14: Scatter Plot 2

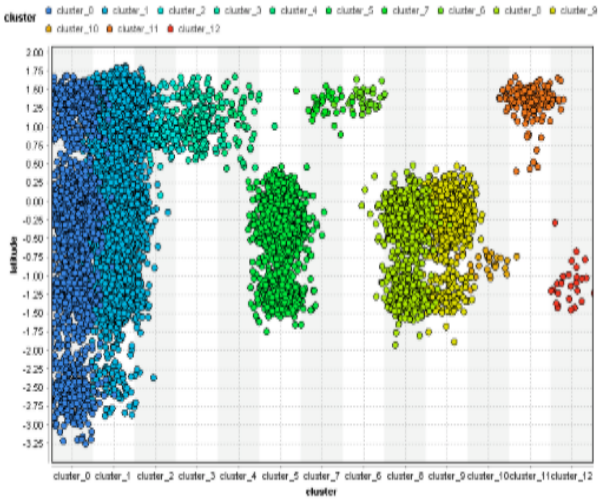

Figure 15: Scatter Plot 3

Analysis of Cluster 2

- **No of instances**
  203
- **Dates/Month active**
  1983-2004
- **Province/State**
  Punjab and Jammu 'n' Kashmir
- **Attack Type**
  Bombing/Explosion
  An incident of hostage is reported
- **Group Name**
  1.Akali Dal Party
  2.Bhinderanwale Tiger Force of Khalistan (BTHK)
  3.Dishmish Regiment
  4.Hizbul Mujahideen (HM)
  5.Muslim Janbaz Force
  6.Muslim Militants
  7.Muslim Rebels
  8.Muslim Separatists
  9.Saffron Tigers
  10.Sikh Extremists
- **Inference**
  Arms and explosives were used. Muslim and Sikh extremists played an important role in the attack (1983-2004)

  Operation Bluestar was an Indian military operation carried out between 1st and 8th June 1984 by Prime minister Indira Gandhi in Amristar,so there were many Sikh extremists who carried out attacks in and after 1984.

Analysis of Cluster 3

- **No of instances**
  193
- **Dates/Month active**
  1984-2008
- **Province/State**
  Punjab and Jammu 'n' Kashmir
- **Attack Type**
  Assassination
- **Group Name**
  Sikh and Kashmiri Extremists

- **Inference**
  Specificity is 3 which means an event did not occur in city/ village. Latitude and Longitude targeted often are :-
  30.966064
  76.523162
  31.326015
  75.576183
  Districts frequently targeted are :- Amritsar District, Doda District, Firozpur district Gurdaspur District, Jalandhar district

Analysis of Cluster 4

- **No of instances**
  49
- **Dates/Month active**
  1985-2002
- **Province/State**
  Delhi,Chandigarh,Haryana,Punjab,Jammu and Kashmir,Uttar Pradesh
- **Attack Type**
  Explosives and Firearms
- **Group Name**
  Sikh Extremists
- **Inference**
  Many attacks took place in June, 1991.

  The reason for the attacks could be the May 21, 1991 assassination of Mr Rajiv Gandhi by LTTE.

Analysis of Cluster 5

- **No of instances**
  1017
- **Dates/Month active**
  2010-2017, mostly 2009 and 2010
- **Province/State**
  West Bengal
- **Attack Type**
  1.Assassination
  2.Bombing/Explosion
  3.Armed Assault
  4.Facility/Infrastructure Attack
- **Group Name**
  Communist Party of India - Maoist (CPI-Maoist)
- **Inference**
  Number of Arms and Ammunitions Recovered from Smugglers in India (2010 to 2012-upto 08.05.2012) As per https://www.indiastat.com/crime-and-law-data/6/extremist-activities/94/stats.aspx website

Analysis of Cluster 6

- **No of instances**
  34 items
- **Dates/Month active**
  Month:6,7,8,9,10 Year: 1995-2009
- **Province/State**
  Jammu and Kashmir
- **Attack Type**
  Armed Assault, Assassination, Bombing/ Explosion
- **Group Name**
  Al-Faran,Hizbul Mujahideen (HM), Jaish-e-Mohammad (JeM), Lashkar-e-Taiba (LeT)
- **Inference**
  Mostly targeting: Military Personnel, Police Patrol.
  In the year 2001, many incidents took place in the months of July and August. The dates 19,23,26 are widely used.

Analysis of Cluster 7

- **No of instances**
  34 items
- **Dates/Month active**
  Dates active: 2-15 Month: 5-11 Year: 1995-2007
- **Province/State**
  Jammu and Kashmir
- **Attack Type**
  Armed Assault, Bombing/ Explosion, Assassination, Hostage Taking (Kidnapping)
- **Group Name**
  Al-Faran,Hizbul Mujahideen (HM), Jaish-e-Mohammad (JeM), Lashkar-e-Taiba (LeT), Muslim militants
- **Inference**
  Mostly targeting:Private Citizens and Property Dates of 2-15 was found.

Analysis of Cluster 10

- **No of instances**
  27 items
- **Dates/Month active**
  Dates active: 25-30 Month: 07 Year: 2008
- **Province/State**
  Gujarat/Surat
- **Attack Type**
  Bombing/Explosion
- **Group Name**
  unknown
- **Inference**
  Business/Private Citizens Property repeatedly targeted

Analysis of Cluster 11

- **No of instances**
  159 items
- **Dates/Month active**
  Dates active:25-30 Month:09-12
- **Province/State**
  Jammu and Kashmir, Uttar Pradesh, Punjab, Uttaranchal
- **Attack Type**
  Firearms, Explosives
- **Group Name**
  Mujahideen (HM),Jaish-e-Mohammad (JeM),Khalistan Liberation Force,Lashkar-e-Taiba (LeT),Separatists,Tehrik al-Mojahedin
- **Inference**
  (Sopore) a place is repeatedly targeted Date 27 was widely used in years 2011-2018 and in Srinagar.

Analysis of Cluster 12

- **No of instances**
  26 items
- **Dates/Month active**
  Dates active:25-30 Month:09-12
- **Province/State**
  Chhattisgarh
- **Attack Type**
  Bombing/Explosion,Armed Assault

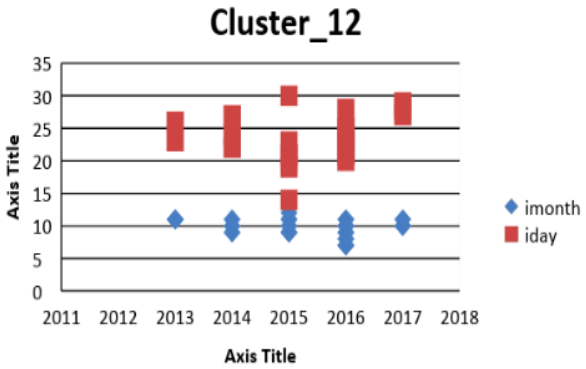

Figure 16: Cluster 12

- **Group Name**
  Maoists
- **Inference**
  November month dates 23,24,25,26,27,30 ,11/23 and 11/25 were repeated.

4.2.3 Observations

The following observations were made -

- Parliament sessions are conducted in India as:Budget session: February to May. Monsoon session: July to September. Winter session: November to December.(Cluster12) It has been observed from the clusters that the frequently targeted months are budget session months.
- Constitution Day (Samvidhan Divas), is on 26 November which is celebrated to commemorate the adoption of Constitution of India. Many Clusters showed that there are frequent targets on Date 26 of months or around 27 , 28 of different months.
- World of Warcraft, a multiplayer online role-playing video game was world's most used and subscribed game in 2004. Since the game's release in 2004, over 100 million accounts have been created and attacks increased after the release.
- There were several attacks in 2003 after Nov 23 when India accepted Pakistan's offer of a ceasefire in Kashmir.
- The targets were mostly defense or police personnel.

- The attack was repeated on specific dates like 11/23 and 11/25. The eastern region of Kashmir like the town of Sopore is affected several times because of the Pakistan border, as it is easy for the terrorists to enter.

- A pattern has also been recognized that the eastern coast cities of India is attacked as the terrorists find their way to enter through Arabian Sea.

4.3 Classification Technique - Naive Bayes

We have used the Naive Bayes classifier. It is basically based on Bayes' theorem and predicts class probabilities by considering independence of feature from class instance. It gives result by estimating the normal distributions. Bayes theorem uses the property of prior probability, observed probability, possibilities and observe probability. Major Zero probability influence can be overcome by Laplace correction.

The advantages of Naive Bayes are-

- With a small amount of training data, the parameters required to classify the dataset can be obtained. Complex real world problems can be solved with simple assumptions and code designs. Categorical and continuous values are supported by this classifier.

- Assuming independent between features requires only the variance of the variables for each label to be determined.

- Intensity of computational memory and processing is low.

- The training time is also less compared to other methods.

The training and testing dataset for classification can be seen in Figures 17,18. The output was obtained using Rapid Miner. (Ref Fig 19, 20) The code can be seen in figures 21,22.

4.3.1 Inference of Classification

- Study 1 was conducted using Rapid Miner Tool (Refer Fig. 19) The Figure 18 shows that the record 2234, the year 2018, date 19 and month 2 predicted a class label sopore and on 10th of February 2018, there was an attack by Jaish-e-Mohammed fidayeen terrorist group in Sunjuwan, Jammu nearly 300

id	iyear	imont	iday	provstate	city	latitude	longitude
1	1988	4	1	Punjab	Kapurthala District	31.37148	75.39368
2	1988	4	1	Haryana	Bhagana	29.0696	75.85194
3	1988	4	1	Uttaranchal	Pangot	29.42301	79.42749
4	1988	4	1	Punjab	Jodhan Nagri	31.60648	75.14724
5	1988	5	1	Punjab	Patiala	30.34	76.38
6	1988	5	1	Orissa	Dadha	20.40494	85.83455
7	1988	6	1	Punjab	Mudki	30.77664	74.88288
8	1988	7	1	West Bengal	Darjeeling	27.04632	88.27116
9	1988	7	1	Punjab	Rupnagar	30.96606	76.52316
10	1988	8	1	Madhya Pradesh	Nowgong	25.06225	79.43966
11	1988	8	1	Assam	Tinsukia	27.48946	95.36014
12	1988	9	1	Punjab	Qadian	31.81903	75.37658
13	1988	9	1	Punjab	Gurdaspur district	32.04076	75.40189

Figure 17: Training Data for Naive Bayes

222	2221	2017	3	31	Odisha		18.16408	81.953482
223	2222	2017	3	31	Odisha		19.175813	83.41065
224	2223	2017	3	31	Karnataka		12.470556	77.001667
225	2224	2017	3	31	Odisha		18.16408	81.953482
226	2225	2017	5	31	Jammu and Kashmir		34.288891	74.463715
227	2226	2017	5	31	Meghalaya		25.896315	91.768356
228	2227	2017	7	31	Jammu and Kashmir		33.785717	75.066156
229	2228	2017	7	31	Odisha		18.543655	82.222946
230	2229	2017	8	31	Jammu and Kashmir		33.75245	74.907013
231	2230	2017	8	31	Bihar		25.18041	86.259059
232	2231	2017	10	31	West Bengal		22.891893	88.396714
233	2232	2017	12	31	Jammu and Kashmir		33.966527	74.964225
234	2233	2017	12	31	Assam		25.180162	93.015788
235	2234	2018	10	2	Jammu and Kashmir		34.288891	74.463715

Figure 18: Testing Data for Naive Bayes

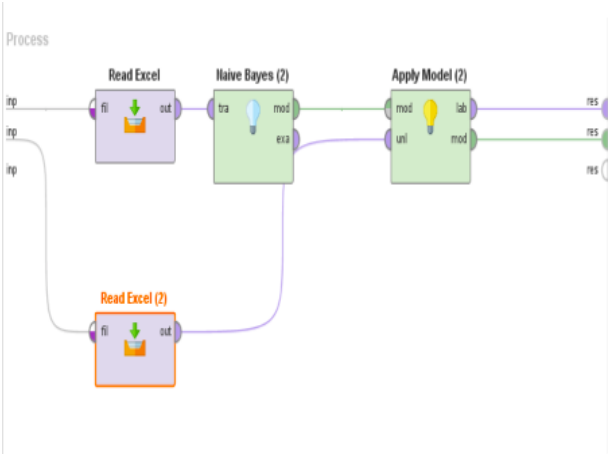

Figure 19: Process Method for Naive Bayes

Row No.	F	prediction(ci...	confidence(...	confidence(...
2222	?	Mahupadar	0	0
2223	?	Unknown	0	0
2224	?	Mahupadar	0	0
2225	?	Sopore	0	0
2226	?	Bishnupur	0	0
2227	?	Arwani	0	0
2228	?	Mathili	0	0
2229	?	Imam Sahib	0	0
2230	?	Raniganj	0	0
2231	?	Raniganj	0	0
2232	?	Srinagar	0	0
2233	?	North Cachar...	0	0
2234	?	Sopore	0	0

Figure 20: Naive Bayes Prediction

kms away from Sopore. Here the attack instance and the places data set was not in the available training and test data set considered. Study 2 was conducted using Python Code for Naive Bayes Classifier. The training(Refer Fig 17) and test(Refer Fig 18) dataset was used. The accuracy obtained by the model was 63%. The class label obtained for the record 2234 in the test data was found to be the same(City Sopore).

- Terrorist attack on May 4, 2018
  Location: Tinsukia, Assam, India
  Group: United Liberation Front of Assam
  Fatalities: A police officer and a terrorist died in a shooting and grenade attack.
  Output: A place named Ramnagar 600 km (apprx) from Tinsukia was predicted.

- Terrorist attack on Oct 20, 2018
  Location: Imphal, Manipur, India
  Group: Unknown
  Fatalities: A grenade blast targeted a CRPF truck in Imphal resulting in one CRPF personnel killed and another one injured.
  Output: A place named Wangoi 17.2 km (apprx) from Imphal, Manipur was predicted.

- Terrorist attack on Nov 14, 2018
  Location: Bijapur, Karnataka, India
  Group: CPI
  Fatalities: A bomb placed by Maoists detonated injuring five security personnel and one civilian.
  Output: Unknown was predicted as one of the

```
import math
import numpy

def runtest(testPoint):
    LabelTest = []
    for i in testPoint:
        values = 0
        save = ""
        for k in tempflag:
            prob = 1 * totalprob[k]
            j=0
            while j< (len(i)):
                prob = prob * gaussian_distribution(i[j], Labelmean[k][j], Lablestd[k][j])
                j+=1
            if(values<prob):
                save = k
                values = prob

        LabelTest.append(save)

    return LabelTest


def filewrite(LabelTest):
    f = open("output.txt", "w")
    for i in LabelTest:
        f.writelines(i + '\n')

def gaussian_distribution(x, mean, stdev):

    # Correcting the Error
    if(stdev==0):
        stdev=1

    exponent = math.exp(-(((x - mean) ** 2) / (2 * (stdev ** 2))))
    return (1 / (stdev * ((2 * math.pi) ** (1 / 2)))) * exponent


def StandardDV(val):
    return numpy.std(numpy.transpose(val), axis=1)


def mean(val):
    return numpy.mean(numpy.transpose(val), axis=1)


def trainNB(featureMatrix, labels):

    global Labledict
    global Labelmean
    global Lablestd
    Labledict = {}
```

Figure 21: Code for Naive Bayes Classifier

Figure 22: Outcomes of Naive Bayes Classifier

class label of city was unknown.

References

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A Appendices

id	iyear	imonth	iday	provstate	city	latitude	longitude	specificity	success	suicide	attacktype	targtype1	targsubtyp	gname	weaptype
201001070003.00	2010	1	7	Jharkhand	Salpatra	23.7014	86.58667	1	1	0	Hostage T	Violent Pe	Party Offi	Communi	Firearms
201001070004.00	2010	1	7	West Beng	Murabani	22.56916	86.97367	1	1	0	Hostage T	Terrorists/	Non-State	Communi	Firearms
201001150002.00	2010	1	15	Jharkhand	Gumla	23.04151	84.54449	1	1	0	Bombing/	Police	Police Sec	Communi	Explosive
201001150005.00	2010	1	15	Jharkhand	Gumla dis	23.04151	84.54449	3	1	0	Armed As	Police	Police Sec	Communi	Firearms
201001170002.00	2010	1	17	Bihar	Gaya	24.78147	84.98641	1	1	0	Bombing/	Telecomm	Telephon	Communi	Explosive
201001170003.00	2010	1	17	Bihar	Gaya	24.78147	84.98641	1	1	0	Facility/In	Private Ci	Vehicles/	Communi	Incendiar
201001170014.00	2010	1	17	Andhra pr	Khammam	17.24705	80.1493	1	1	0	Armed As	Terrorists	Terrorist	Unknown	Melee
201001180024.00	2010	1	18	Bihar	Nadaul	25.29663	85.01738	1	1	0	Bombing/	Transport	Train/Trai	Communi	Explosive
201001180027.00	2010	1	18	Punjab	Nabha	30.37367	76.14519	1	0	0	Bombing/	Utilities	Oil	Khalistan	Explosive
201001190001.00	2010	1	19	Jharkhand	East Singh	22.48668	86.49966	3	1	0	Armed As	Private Ci	Student	Communi	Firearms
201001190016.00	2010	1	19	Manipur	Imphal	24.79835	93.94043	1	1	0	Bombing/	Police	Police Sec	Unknown	Explosive
201001200003.00	2010	1	20	Manipur	Imphal	24.79835	93.94043	1	0	0	Armed As	Private Ci	Unnamed	Unknown	Firearms
201001200012.00	2010	1	20	Orissa	Koraput d	18.81524	82.7121	3	1	0	Bombing/	Telecomm	Telephon	Communi	Explosive
201001210004.00	2010	1	21	Manipur	Imphal	24.79835	93.94043	1	0	0	Bombing/	Private Ci	House/Ap	Unknown	Explosive
201001210005.00	2010	1	21	Manipur	Hiyangtha	24.72843	93.89672	1	0	0	Bombing/	Governme	Governme	United Ku	Explosive
201001210008.00	2010	1	21	Jharkhand	Palamu di	24.12861	84.18571	3	1	0	Facility/In	Telecomm	Telephon	Communi	Incendiar
201001210009.00	2010	1	21	Manipur	Bishenpu	24.55934	93.81465	2	1	0	Bombing/	Business	Mining	Unknown	Explosive
201001210011.00	2010	1	21	Manipur	Bishnupu	24.62872	93.76133	1	1	0	Bombing/	Governme	Governme	Unknown	Explosive
201001210012.00	2010	1	21	Manipur	Imphal	24.79835	93.94043	1	0	0	Bombing/	Private Ci	House/Ap	Kuki Liber	Explosive
201001220012.00	2010	1	22	Orissa	Koraput	18.81524	82.7121	1	1	0	Facility/In	Governme	Governme	Communi	Incendiar
201001230004.00	2010	1	23	Orissa	Sundargar	22.124	84.04318	3	1	0	Hostage T	Violent Pe	Party Offi	Communi	Unknown
201001230006.00	2010	1	23	Assam	Chirang di	26.63755	90.64405	3	1	0	Bombing/	Transport	Subway	Unknown	Explosive
201001230011.00	2010	1	23	Orissa	Koraput	18.81524	82.7121	1	1	0	Bombing/	Police	Police Sec	Communi	Explosive
201001240001.00	2010	1	24	Tripura	Bhagirath	23.69563	91.91281	1	0	0	Armed As	Governme	Politician	National L	Firearms

Figure 23: Terrorism data Set