





## PROBLEM STATEMENT

“ Conversion of Morse signal into Audio signal using Kmeans Clustering ”

## Objectives

- ▮ Making job of Secret agents like RAW, CBI, SPYs easier
- ▮ Conversion of secretly transmitted Morse signal into Audio signal within seconds
- ▮ Transmission of secret signal with just one button
- ▮ Any alphabet, any symbol, any number can be transmitted by just one button



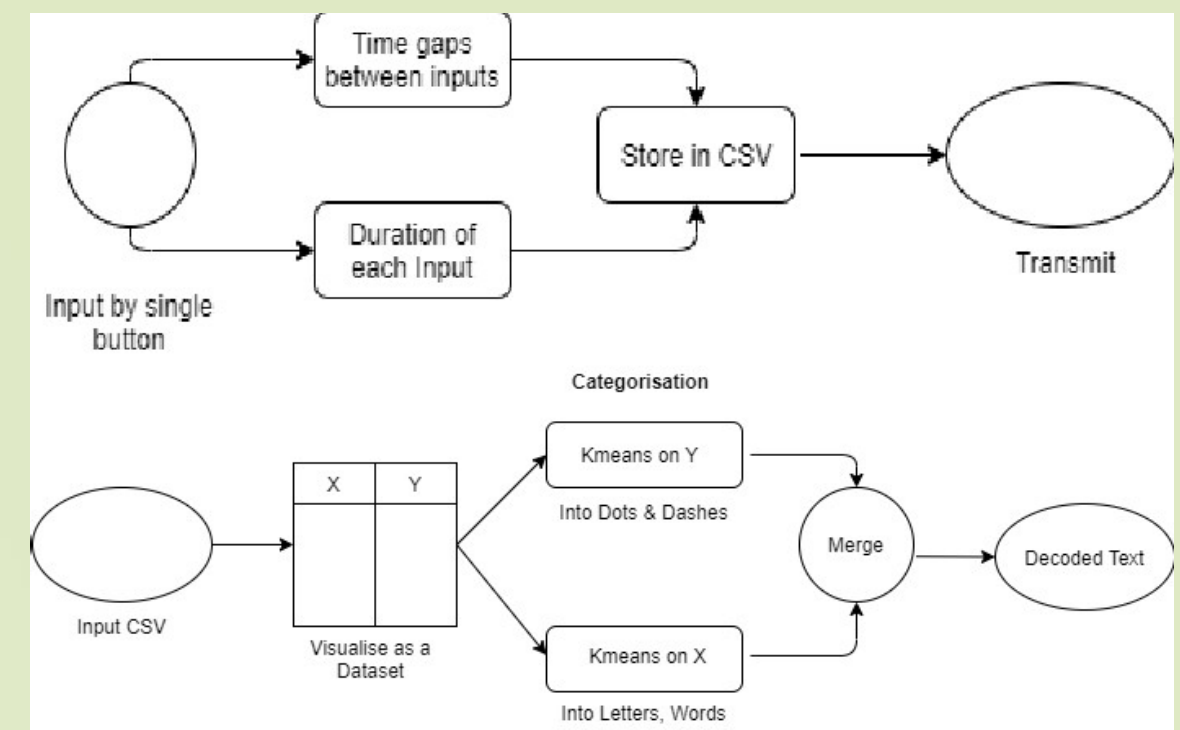
# PROPOSED METHODOLOGY

Can be divided into 3 parts:

- ▮ Taking input from user, converting into csv
- ▮ Conversion of this csv into text using Machine Learning concept i.e., Kmeans clustering
- ▮ Converting this text into Audio using gTTs library

# ARCHITECTURAL DIAGRAMS

Input Mechanism:



Conversion mechanism:

# RESULTS

Input is converted into csv, then categorised using ML  
in this way:

	X_labels	Y_labels
0	2	0
1	0	1
2	2	1
3	0	0
4	0	0
..	...	...
85	2	0
86	2	1
87	0	0
88	2	1
89	1	0

[90 rows x 2 columns]

Categorised data is converted into text:

```
[20] #Decoded Text  
print(word)
```

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Text is converted into Audio:

```
audio=Audio('output.wav')  
audio
```

0:00 / 0:03

Time of Execution:

```
Time taken for converting Morse to Text: 0.8933380000000002 sec  
Time taken for converting Text to Audio: 0.23341999999999974 sec  
Total time of Execution (Morse to Audio): 1.126758 sec
```