

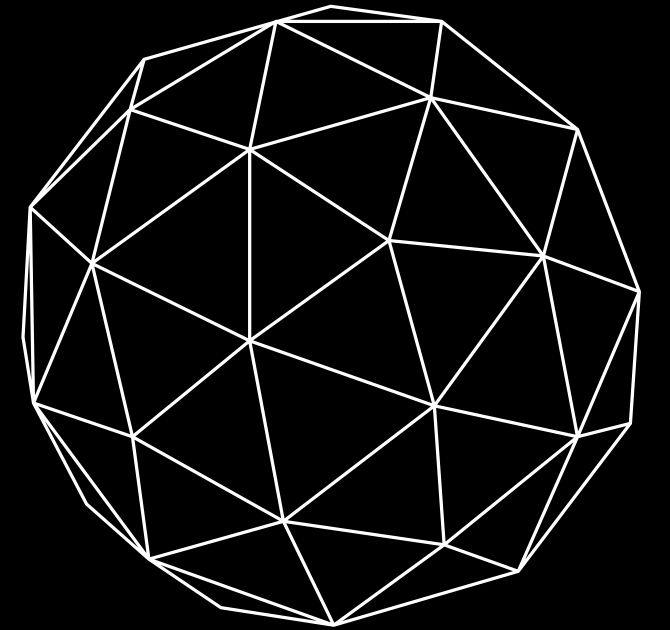


TECH TITANS

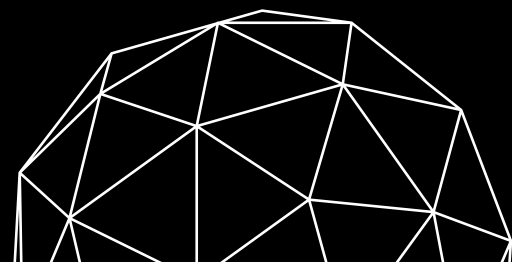
PRESENTATION



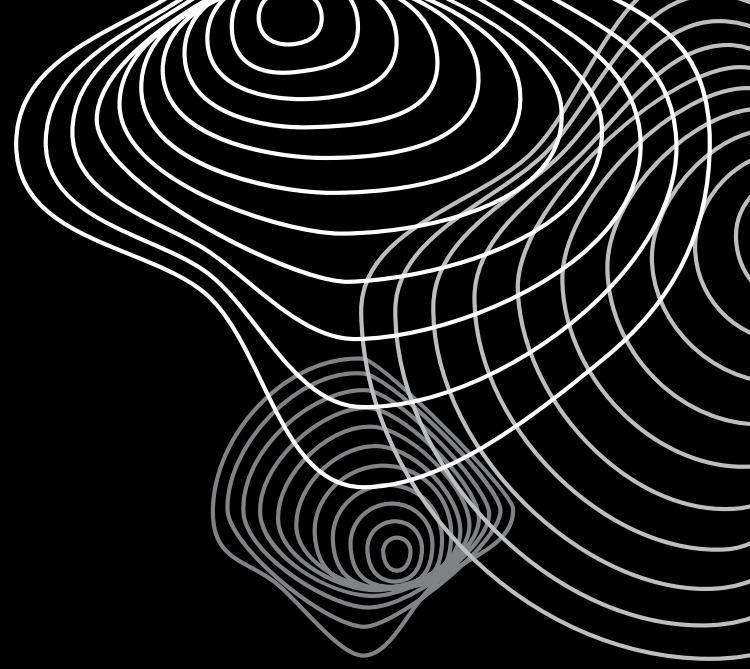
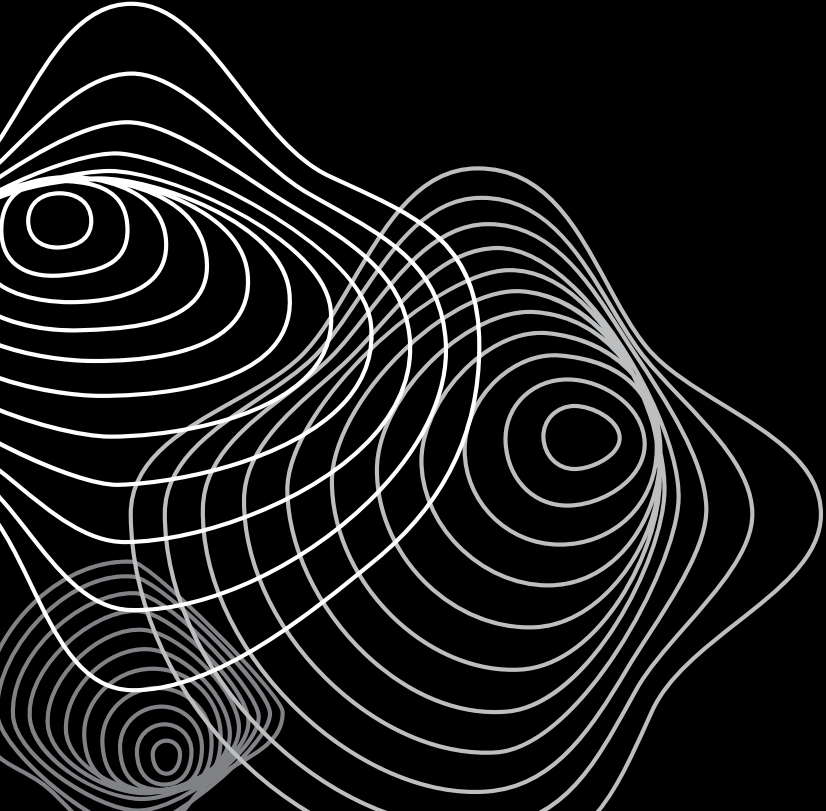
TEAM



1. **N CHARAN SAI – RA2311003011343**
2. **AKASH SINGH – RA2311026010638**

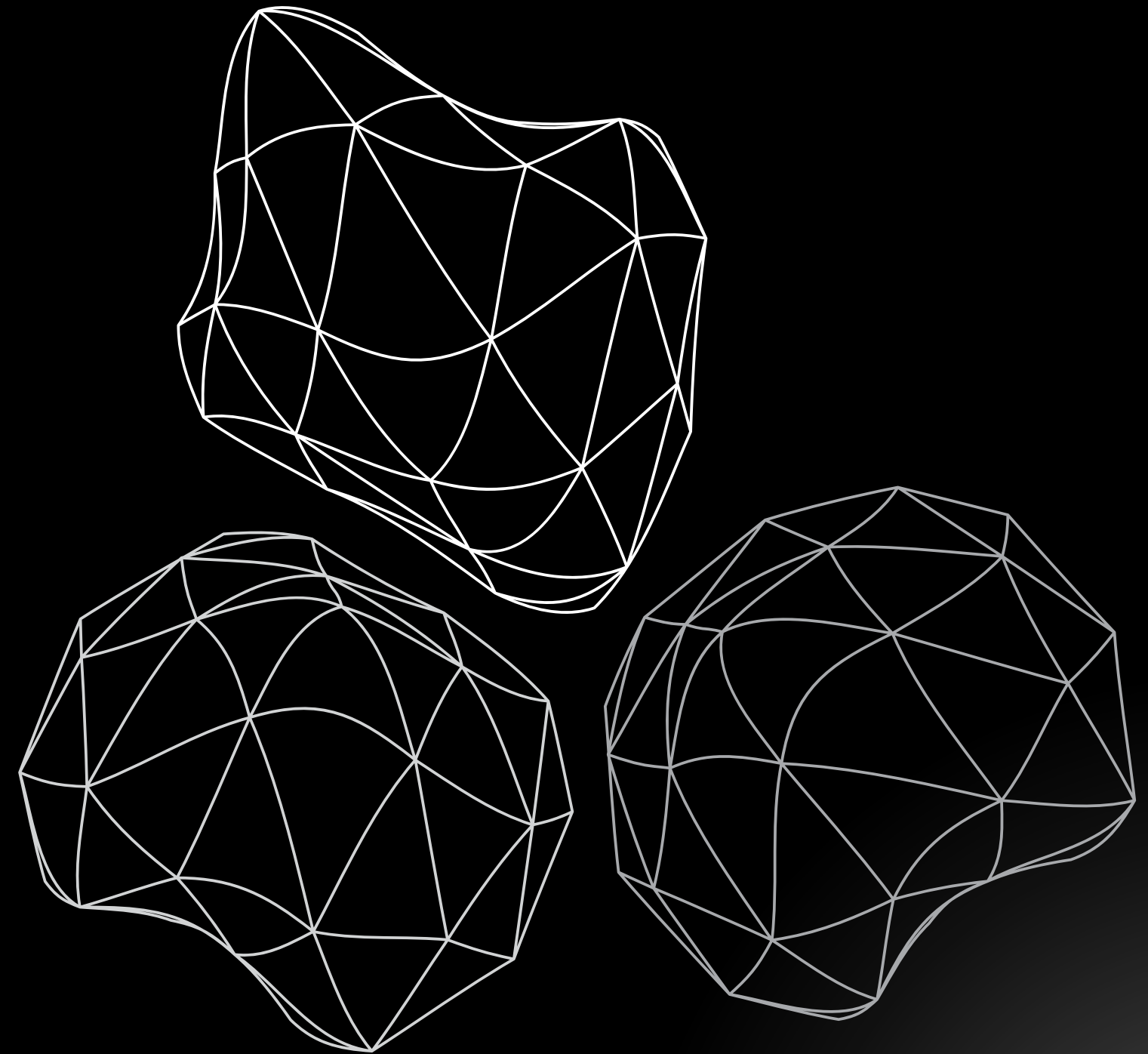


ROUND 1



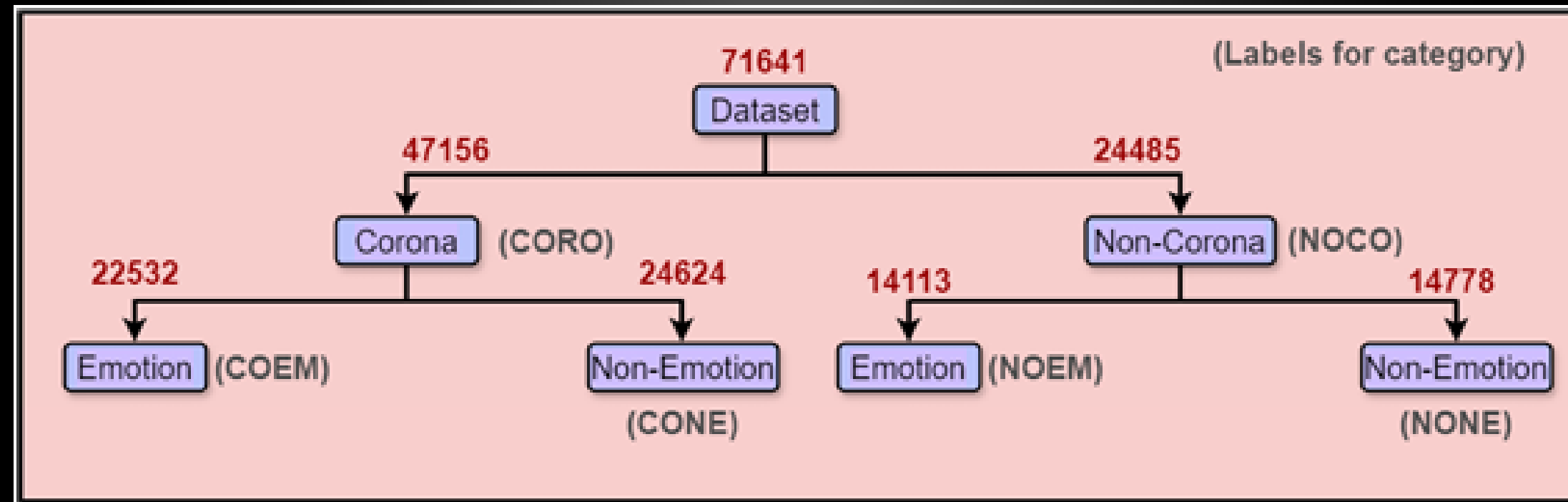
PROBLEM STATEMENT

Multi-Level Classification of
Emotional Well-being Tweets
Based on Content and
Sentiment.



MISSION

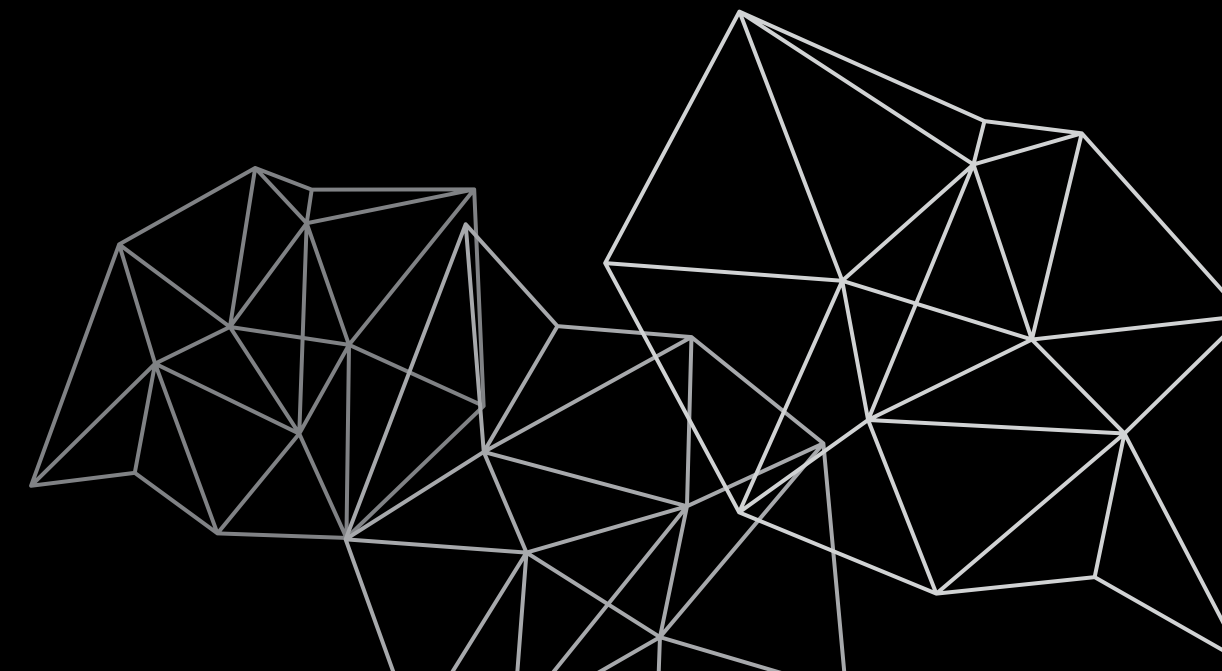
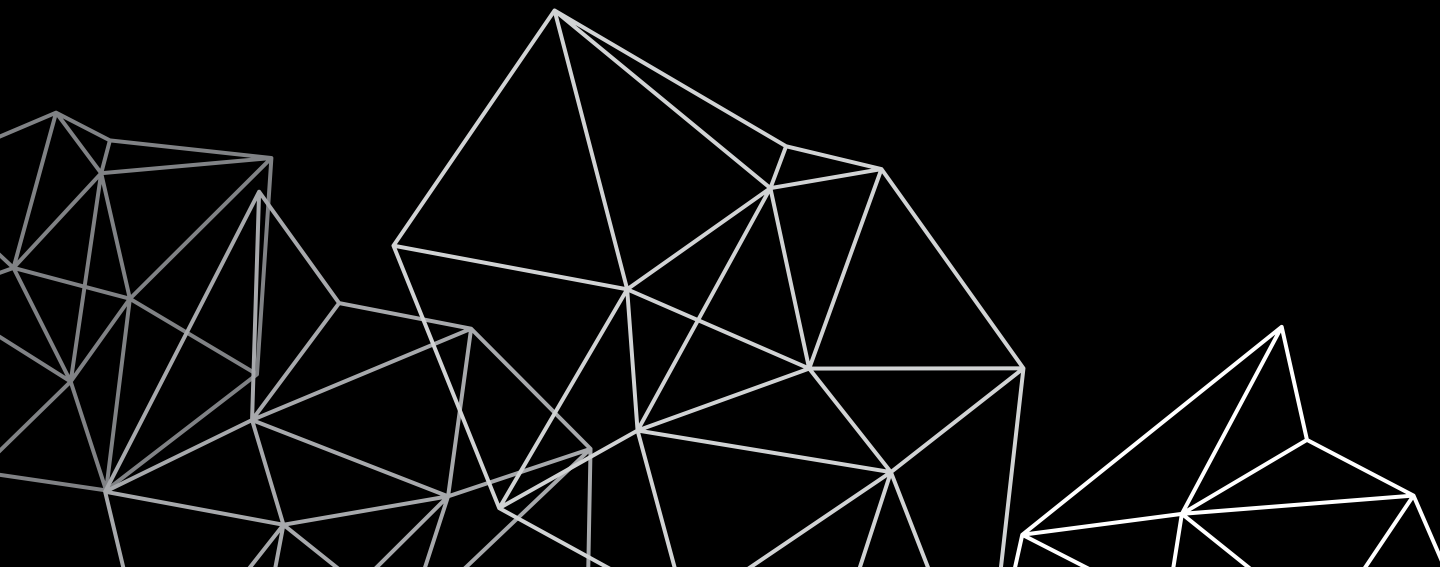
Distinguishing between COVID-19-related and non-COVID-19 tweets while further classifying them based on emotions is essential for understanding public sentiment and misinformation trends.



STEP-BY-STEP PROCESS FOR MULTI-LEVEL CLASSIFICATION

This process involves:

1. Loading and Understanding the Dataset
2. Data Preprocessing (Cleaning & Tokenization)
3. Feature Engineering (TF-IDF/Word Embeddings)
4. Building Classification Models (First-Level & Second-Level)
5. Evaluating Model Performance
6. Making Predictions on the basis of Dataset



FIRST LEVEL CLASSIFICATION

.9942

ACCURACY

.99

MACRO
AVERAGE

.99

WEIGHTED
AVERAGE

SECOND LEVEL CLASSIFICATION

.9482

ACCURACY

.94

MACRO
AVERAGE

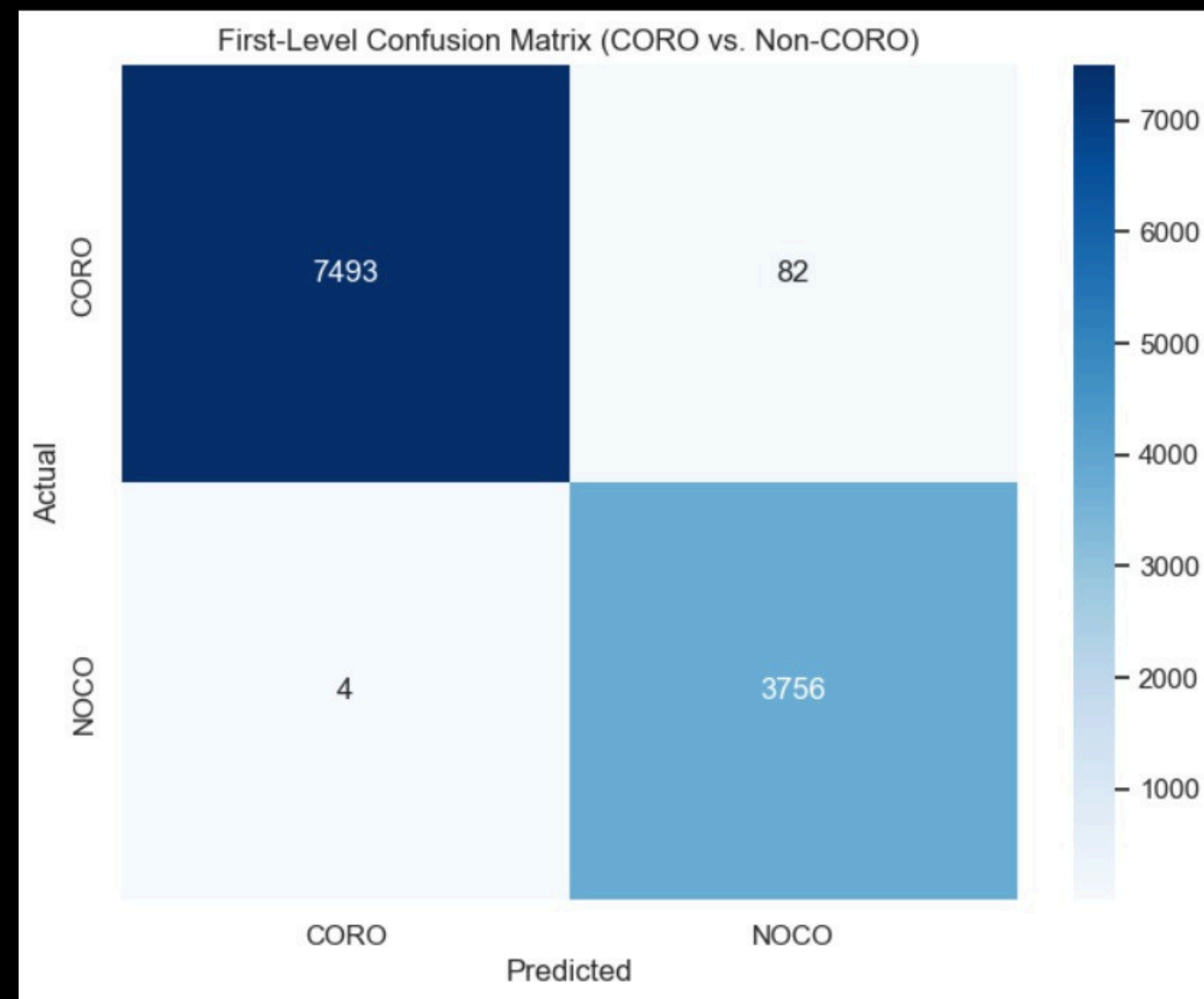
.95

WEIGHTED
AVERAGE

First-Level Classification (CORO vs. Non-CORO):
Best Parameters: {'C': 10, 'penalty': 'l2', 'solver': 'liblinear'}
Test Accuracy: 0.9924

...

accuracy			0.99	11335
macro avg	0.99	0.99	0.99	11335
weighted avg	0.99	0.99	0.99	11335



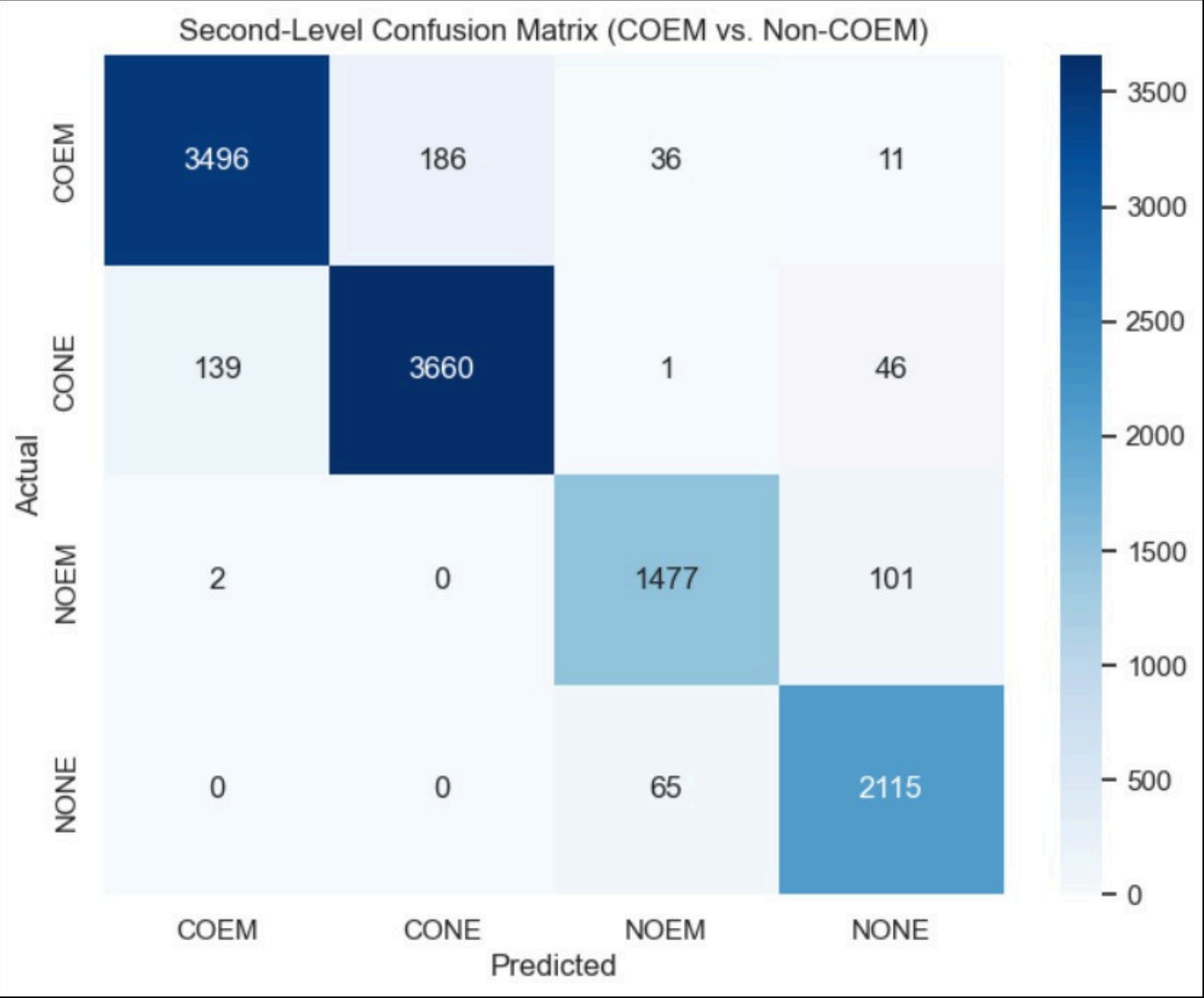
Second-Level Classification (COEM vs. Non-COEM):

Best Parameters: {'C': 1, 'penalty': 'l1', 'solver': 'liblinear'}

Test Accuracy: 0.9482

Classification Report:

	precision	recall	f1-score	support
COEM	0.96	0.94	0.95	3729
CONE	0.95	0.95	0.95	3846
NOEM	0.94	0.93	0.94	1580
NONE	0.93	0.97	0.95	2180
accuracy			0.95	11335
macro avg	0.94	0.95	0.95	11335
weighted avg	0.95	0.95	0.95	11335

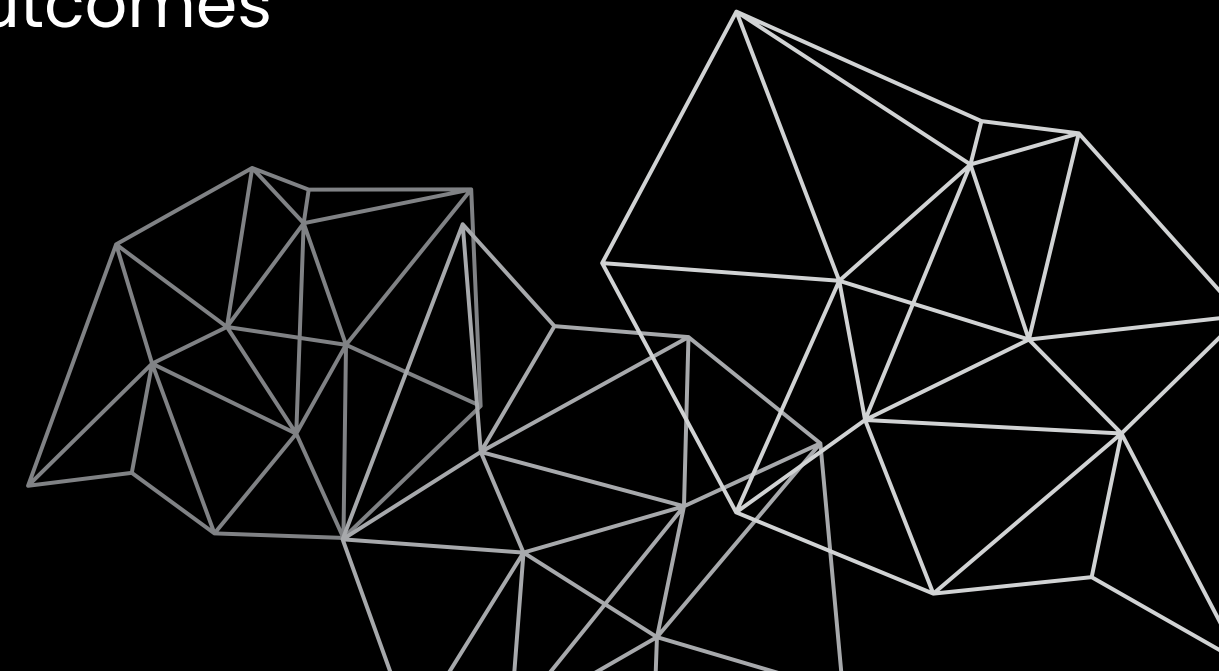


REQUIREMENTS

We have used different libraries of python:-

- 1.Pandas
- 2.numpy
- 3.re
- 4.matplotlib
- 5.seaborn
- 6.scikit learn

We have used Logical Regression for the categorical outcomes
and TF-IDF



OUTPUT

```
Welcome to the Tweet Classification CLI!  
Type 'exit' to quit.  
First-Level Prediction (CORO/Non-CORO): CORO  
Second-Level Prediction (COEM/Non-COEM): COEM  
  
Exiting the program.
```


The background is a dark gradient with intricate white line art. The lines form dense, flowing, wave-like patterns that sweep across the frame, creating a sense of movement and depth. These patterns are most prominent in the corners and along the sides, framing the central text.

THANK YOU