## **Requirements**

Environment: Google Colab (Python 3.10+)

Required Libraries and Versions:

- pandas==1.5.3
- numpy==1.24.3
- scikit-learn==1.2.2
- imbalanced-learn==0.10.1
- nltk==3.8.1
- seaborn==0.12.2
- matplotlib==3.7.1

These packages are pre-installed in Google Colab. For local environments, install via pip:

!pip install pandas numpy scikit-learn imbalanced-learn nltk seaborn matplotlib

NLTK also requires downloading the stopwords corpus. Add this once:

import nltk

nltk.download('stopwords')