



DATA SCIENCE 2024

CONFERENCE RECOMMENDATION

Using Text Classification

Giulia Pais, Vani Ramesh

Group ~53

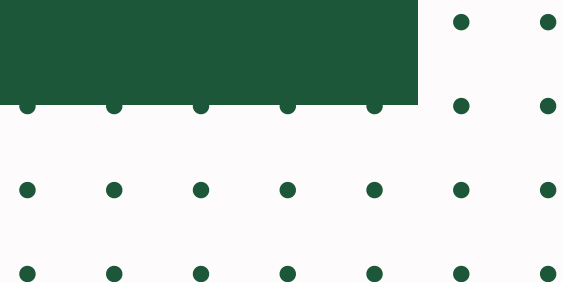
Efficient Hardware
Implementation of Deep
Learning Models for Real-Time
Image Processing in Smart
Surveillance Systems

ISCAS



Research Question

Which conference do
we recommend to a
researcher based on
the title of their paper?



Design Process

1

DATA EXPLORATION

2

DATA PROCESSING &
ENCODING

3

MODELS CHOICE

4

HYPERPARAMETER
TUNING

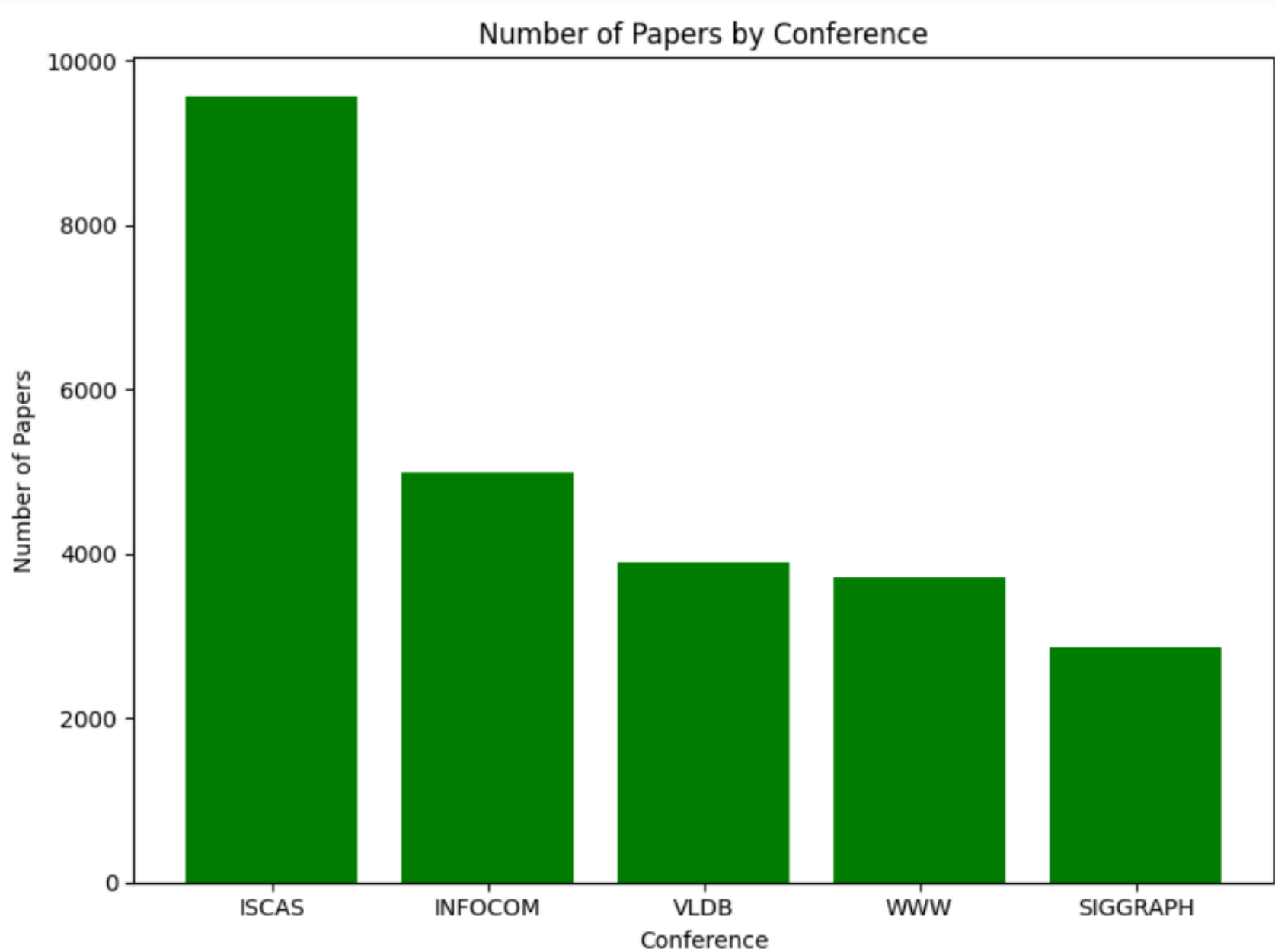
5

5-FOLD CROSS
VALIDATION

6

EVALUATION ON
SEPARATE TEST SET

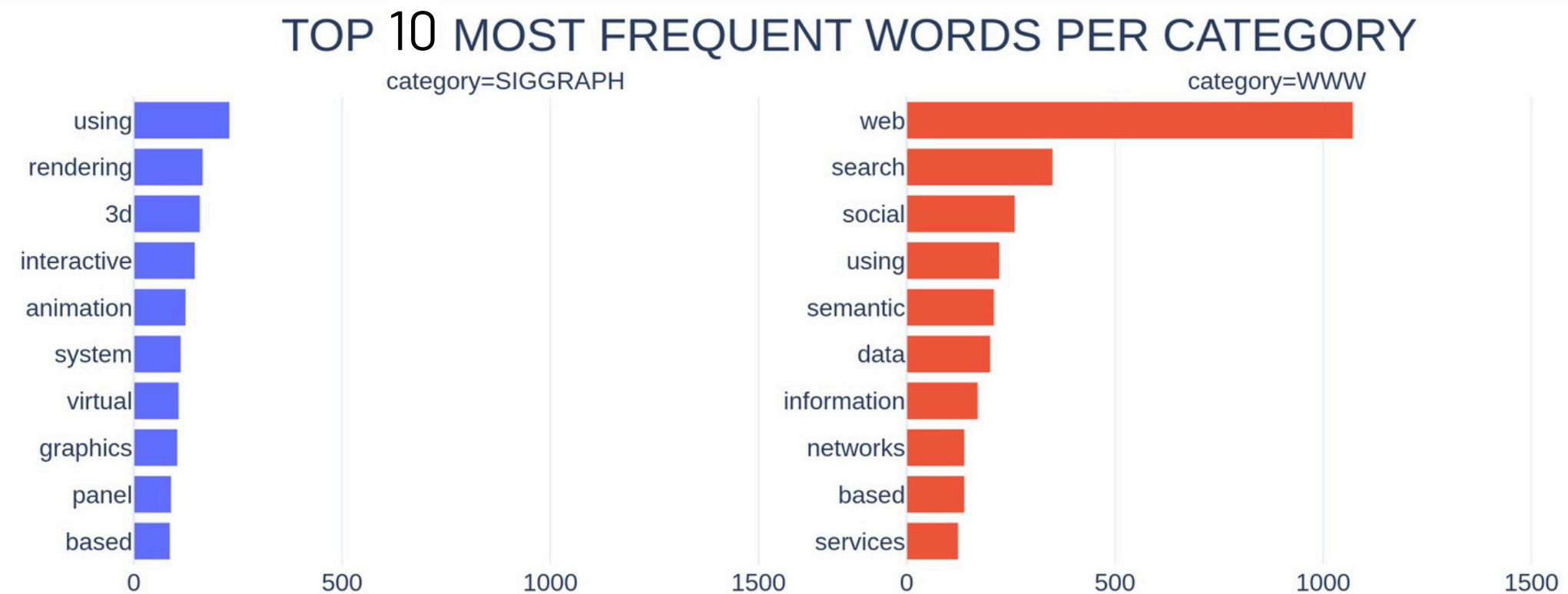
Data Exploration



21,643
Samples

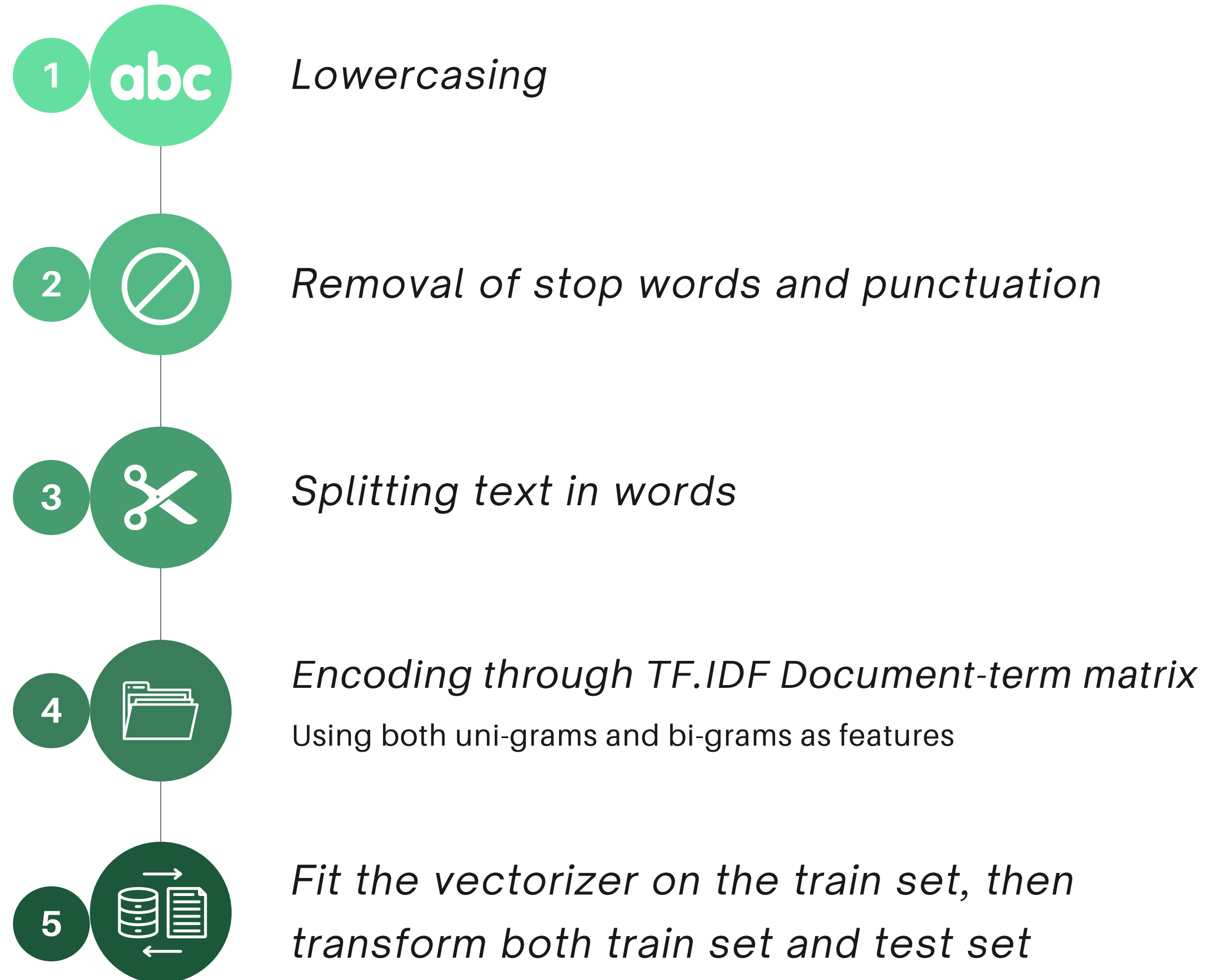


5
Classes



**Excluding stopwords, plotted only 2 categories as an example*

Data pre-processing and encoding



Models

(Complement)

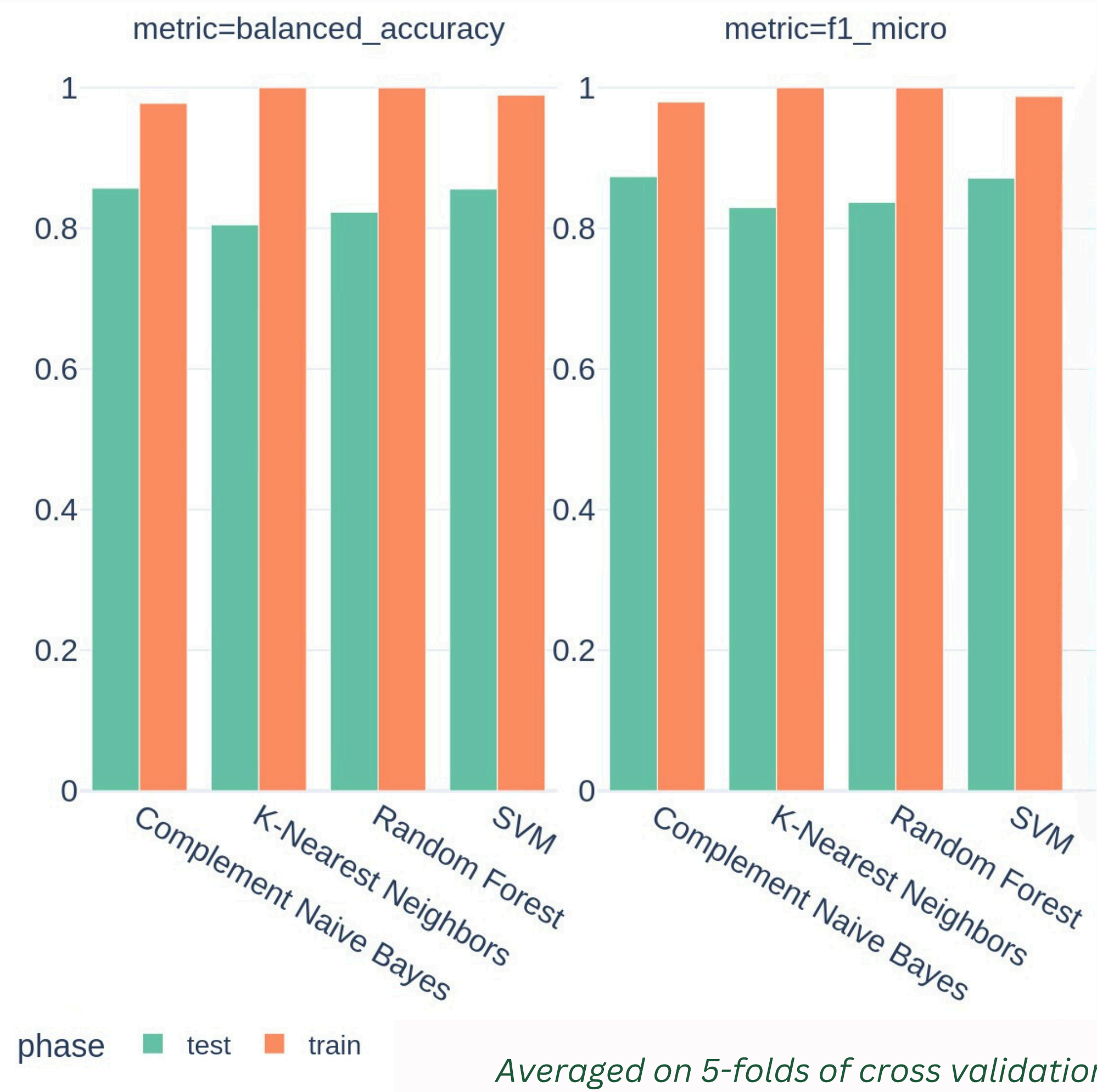
**Naive
Bayes**

k-NN

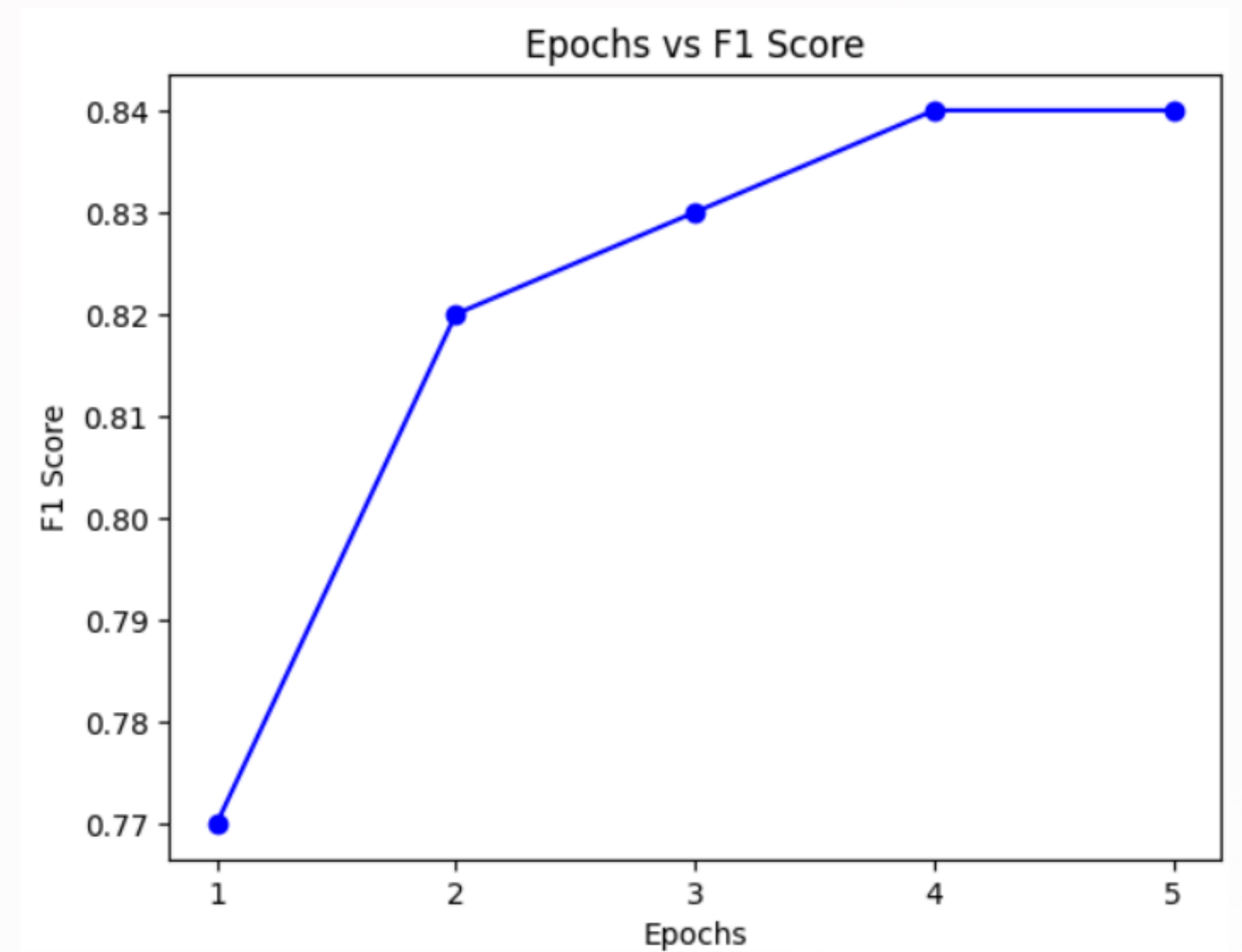
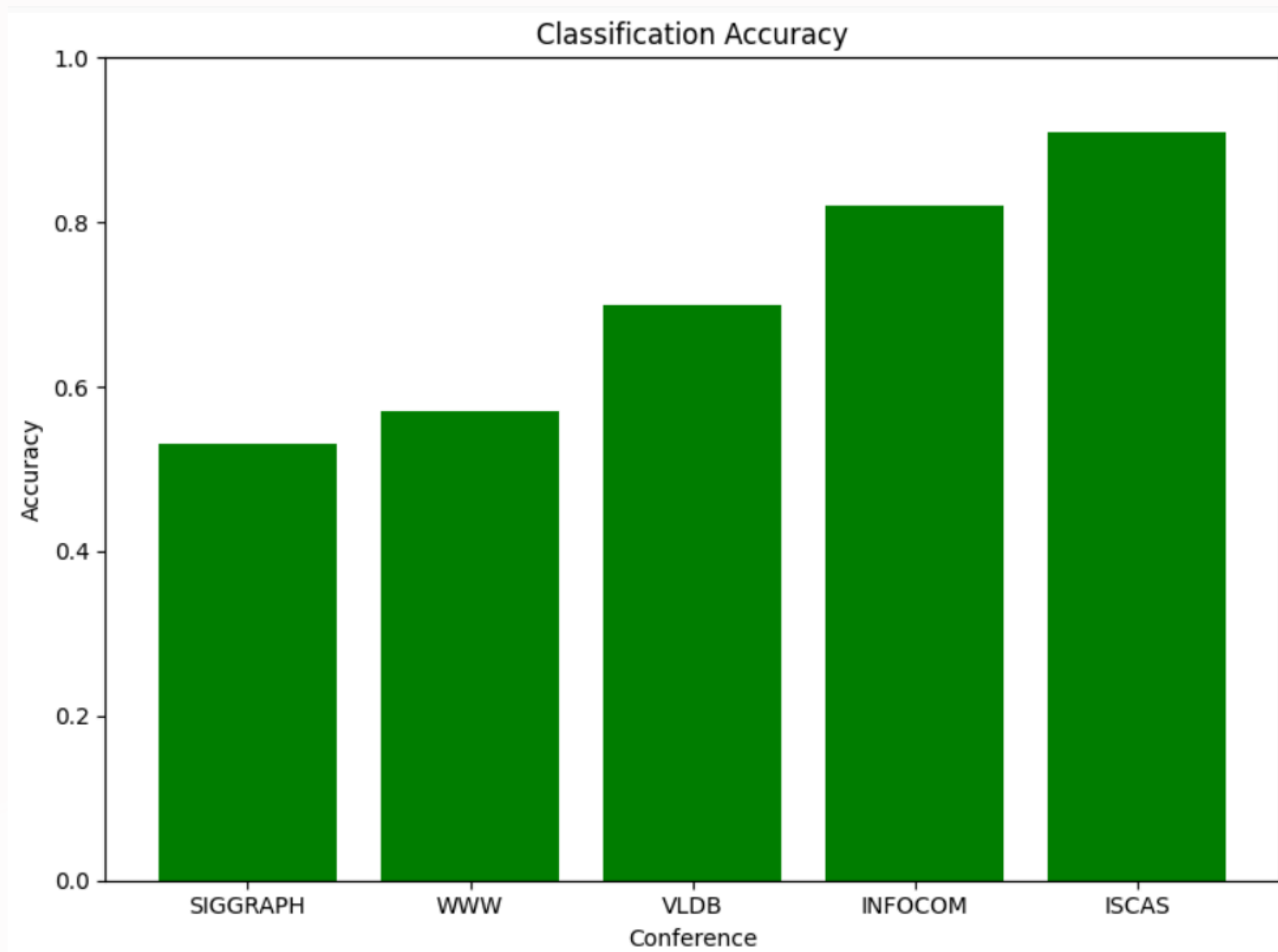
SVM

**Random
Forest**

Models comparison



BERT



Further Improvements

01

Better Methods to
handle class imbalance

02

Models like RNN or LSTM

03

Regularization techniques
to handle overfitting

Conclusion

Which conference do
we recommend to a
researcher based on
the title of their paper?

Automated Conference Recommendation Systems

Integration with Academic Platforms

Personalization and Adaptability
