

# Midterm Project

Performance of explainer in different text classification models

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# Outline

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- Top K Features Mask

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# Introduction

## Explainer

"Why Should I Trust You?": Explaining the Predictions of Any Classifier

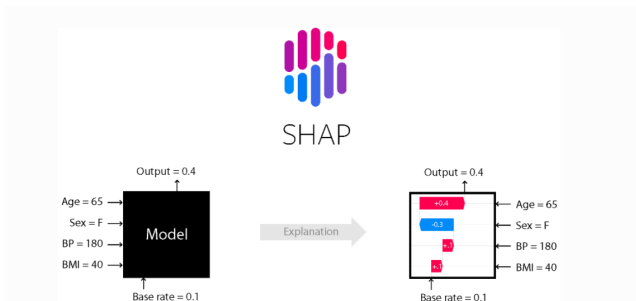


Figure: An example of SHAP explainer

# Introduction

## Model and Dataset

	Model 1	Model 2
Num. of Labels	2	5
Model Name	distilbert-base-uncased	distilbert-base-uncased
Tokenizer Name	distilbert-base-uncased	distilbert-base-uncased
Dataset	Clinical Statement	Medical abstracts
Test Accuracy	85.5%	77%

# Method

## Salience Analysis

```
{ 'label': 'LABEL_2', 'score': 1.0 }
```

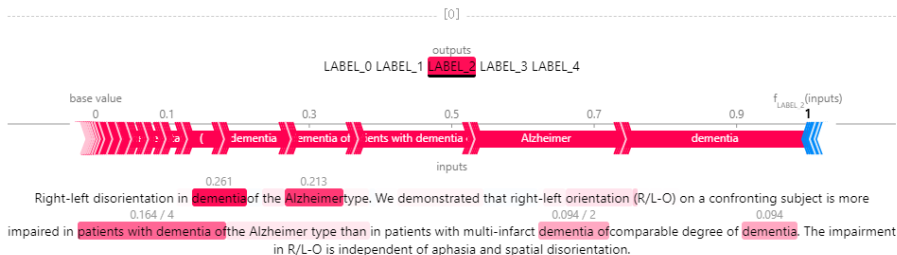


Figure: A Text Example

# Method

## Top K Mask

### How to test this result?

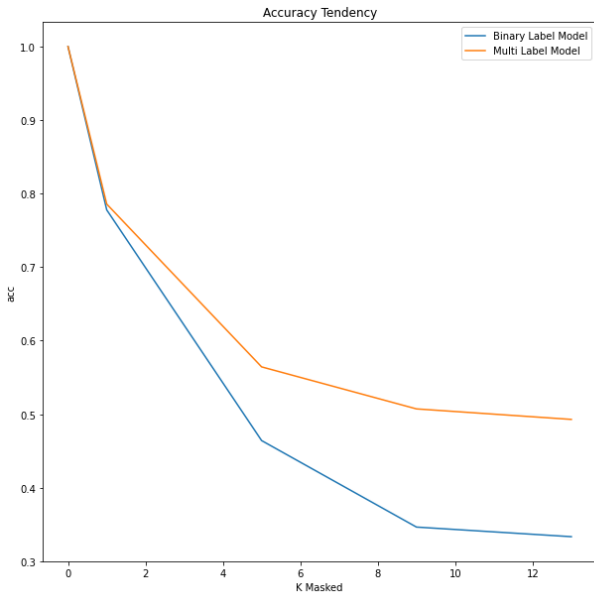
'Right-left disorientation in [UNK] of the [UNK] type. [UNK] [UNK] [UNK] [UNK] -left orientation [UNK] R/L-O) on a confronting subject is more impaired in [UNK] [UNK] dementia [UNK] the Alzheimer type than [UNK] [UNK] [UNK] [UNK] infarct [UNK] [UNK] comparable degree of [UNK] . The impairment in R/L-O is independent of aphasia and spatial disorientation.'

Figure: Top K masked

Repeat the same process to all sample on the test set, to see if the accuracy will decrease.

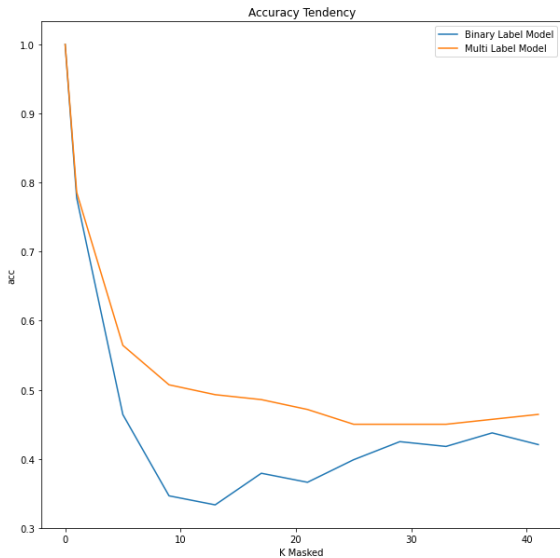
# Result

## Accuracy Tendency



# Result

## Accuracy Tendency





# Code

Github Link:

[https : / github.com / RmmLeo / STAT6289\\_homework / tree / main / Midterm%20Project](https://github.com/RmmLeo/STAT6289_homework/tree/main/Midterm%20Project)