```
\begin{array}{ccc} (\mathrm{SP}) & (\mathrm{GC}) & (\mathrm{EF}) & (\mathrm{TA}) \\ 0.7574 & (0.8695) & (1.0000) \end{array}
                                                                    \begin{array}{c} \text{Google} \\ 0.6947 \end{array}
                      Google
                                                                                                    0.8035\ 0.7706
                                                                                                                               (0.5643) (0.4436)
                                                                                                            APP
                                                                      3
                                                                                        4
       (1)
                                                                                          NMT
       (2)
                                Papineni [?] BLEU Bilingual Evaluation Understudy
Zhang [?] BERTScore BERT
[?] AHP
                                                                                                                                                                     Lin Och
Rei [?] (
                                                                                                                                          n-gram
                [?]
[itemindent=2em]
1
2
3
4
5
6
                                                                                   (AHP)
              1,.
                                      (Google Translate) DeepL
       2.
```

Google "

3.

jieba """""""

1.

(SP) (GC)

DejaVu Sans Mono

```
1 class TranslationEvaluator:
2
3
        def ___init____(self):
4
5
                   (SP) (SC)
6
                                      (EF)
                                                (TA)
7
              self.weights = {
8
                   "SP": 0.4, #
"GC": 0.25, #
"EF": 0.2, #
"TA": 0.15, #
9
10
11
12
              }
13
14
15
              self.stopwords = set(["","","","","","","","","","",""])
16
17
```

DejaVu Sans Mono

```
1 def calculate_semantic_preservation(self, original_text, translated_text):
\frac{3}{4}
5
6
            original_text (str):
7
            translated_text (str):
9
10
            float:
                         [0,1]
       22 22 22
11
12
13
       if not original_text.strip() or not translated_text.strip():
14
            return 0.5
15
       \mathbf{try}:
16
17
            cosine_sim = self.calculate_cosine_similarity(original_text, translated_text)
18
19
            edit_sim = self.calculate_edit_distance(original_text, translated_text)
\frac{20}{21}
22
            semantic_score = 0.6 * cosine_sim + 0.4 * edit_sim
\frac{-2}{23}
\frac{24}{25}
            if semantic_score < 0.2:
26
                 semantic\_score = 0.2
27
28
            return semantic_score
29
       except Exception as e:
            print (f
                          : {e}")
30
            return 0.5
31
```

DejaVu Sans Mono