Text analyzer project

November 4, 2024

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[1]: """5. Text Analyzer Using Map, Filter, Reduce
     Concepts: Lambda functions, map, filter, reduce
     Task: Analyze a text by counting words, filtering common terms, and summarizing
      →the data.
     Goal: Use higher-order functions to manipulate and analyze collections
      →efficiently."""
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```python
[16]: from functools import reduce

      text =  "My name is vinit kumar.I am practicing python language daily to achieve
       →my goals."

      #word count with lower values and split the list so we can count it easily.
      low = list(map(lambda x: x.lower(), text.split()))
      word_count = len(low)
      print("Total words:", word_count)

      #Filtering common terms, by filter:
      common_terms = ["is", "to", "my", "and"]
      rem_com_term = list(filter(lambda x: x not in common_terms, low))
      print("Filtered terms:", rem_com_term)

      #summarizing the data
      summ = reduce(lambda acc,word: {**acc, word: acc.get(word, 0) +1}, rem_com_term,
       →{})
      print("Word frequency:", summ)
```

```
Total words: 14
Filtered terms: ['name', 'vinit', 'kumar.i', 'am', 'practicing', 'python',
'language', 'daily', 'achieve', 'goals.']
Word frequency: {'name': 1, 'vinit': 1, 'kumar.i': 1, 'am': 1, 'practicing': 1,
'python': 1, 'language': 1, 'daily': 1, 'achieve': 1, 'goals.': 1}
```

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