ecomendation-system-by-me-13-02-1

March 10, 2025

[ ]:
```
import pandas as pd
from scipy.spatial.distance import cosine
from scipy.stats import pearsonr
```

[ ]:
```
df = pd.read_csv('/content/sample_vectors.csv')
```

[ ]:
```
def cosine_similarity(vec1, vec2):
    return 1 - cosine(vec1, vec2)  # 1 - cosine distance
```

[ ]:
```
def correlation_similarity(vec1, vec2):
    return pearsonr(vec1, vec2)[0]  # Pearson correlation coefficient
```

[ ]:
```
cos_sim_AB = cosine_similarity(df["Vector_A"], df["Vector_B"])
cor_sim_AB = correlation_similarity(df["Vector_A"], df["Vector_B"])
```

[ ]:
```
cos_sim_AC = cosine_similarity(df["Vector_A"], df["Vector_C"])
cor_sim_AC = correlation_similarity(df["Vector_A"], df["Vector_C"])
```

[ ]:
```
print(f"Cosine Similarity (A, B): {cos_sim_AB}")
print(f"Correlation Similarity (A, B): {cor_sim_AB}")
print(f"Cosine Similarity (A, C): {cos_sim_AC}")
print(f"Correlation Similarity (A, C): {cor_sim_AC}")
```

```
Cosine Similarity (A, B): 0.9949366763261821
Correlation Similarity (A, B): 1.0
Cosine Similarity (A, C): 0.6363636363636364
Correlation Similarity (A, C): -1.0
```

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