ASSIGNMENT – 5 – PART 2

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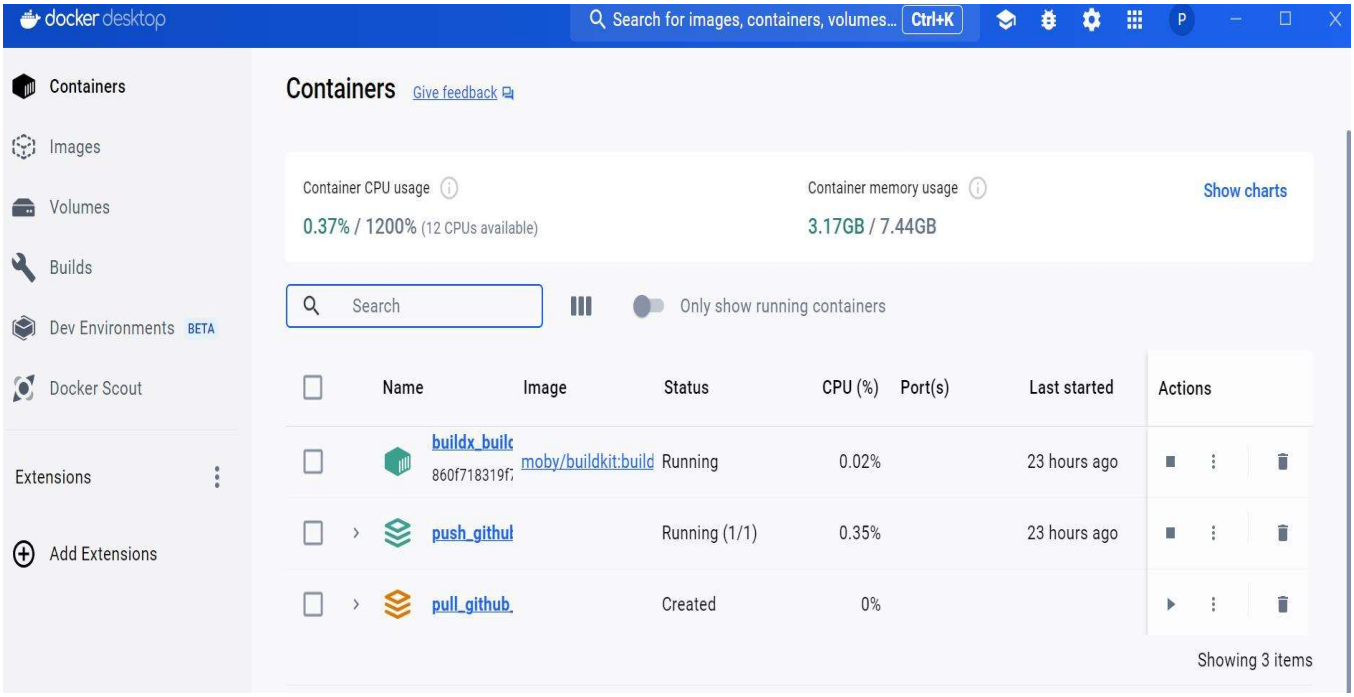
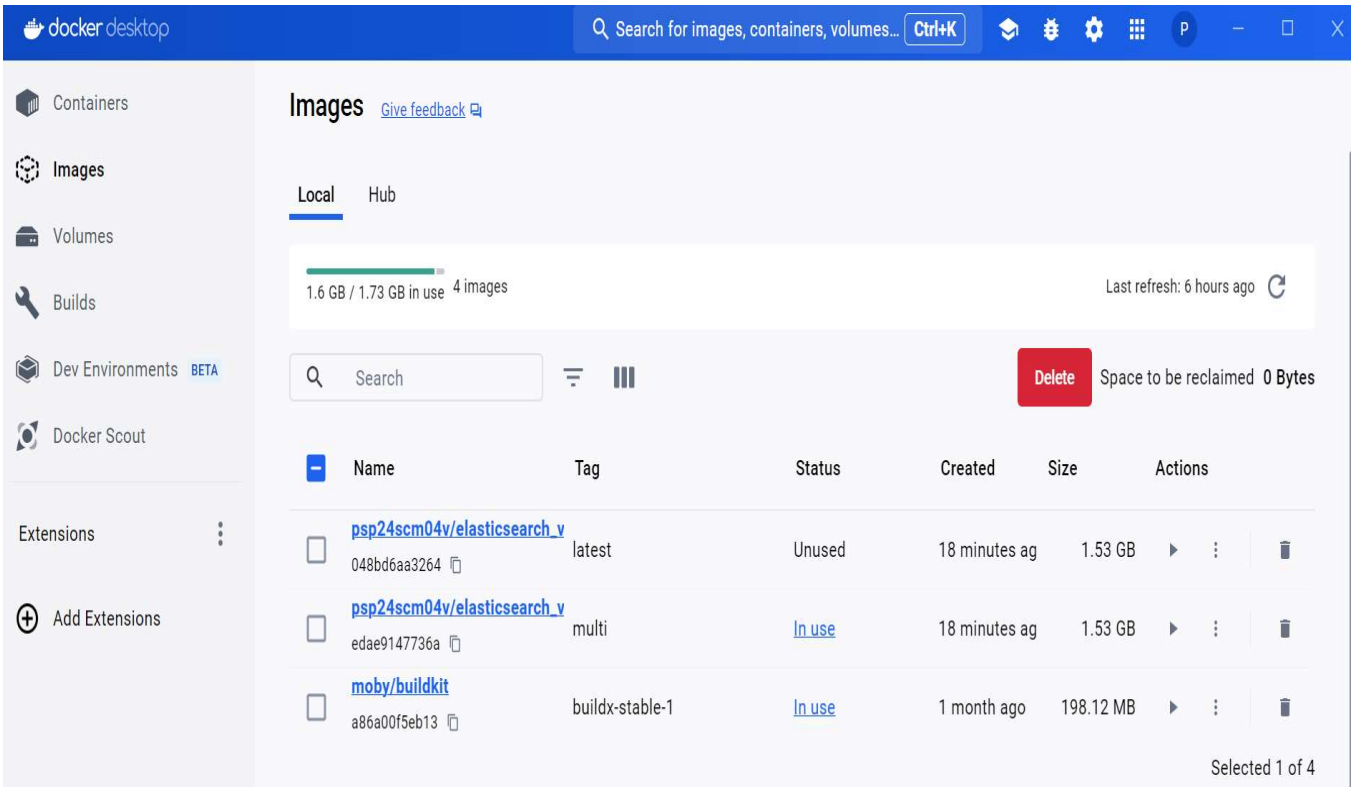
Docker Website and Desktop App Screenshot:





Push_Github_Issues:

[9]:
```
#Sample Issue
pprint(issues[2])
```

```
{'_body': '              ****\r\n\r\n'
          '\r\n'
          '_Originally posted by @sarbazvatanatan in '
          'https://github.com/openai/openai-cookbook/issues/1103#issuecomment-2063022189_\r\n\r\n'
          '            ',
 '_closedAt': '2024-04-18T05:22:50Z',
 '_createdAt': '2024-04-18T05:21:58Z',
 '_issueNumber': '1159',
 '_repo': 'openai-cookbook',
 '_state': 'closed',
 '_title': '****',
 '_type': 'issue'}
```

[ ]:

[10]:
```
#Number of Issues in the given timeframe
pprint(len(issues))
```

```
1994
```

[14]:
```
## Embedding creation using openAI of GitHub Issues.

from openai import OpenAI
from tqdm import tqdm
import time

# Initialize OpenAI client with API key
client = OpenAI(api_key="sk-proj-qvAcF7Mh208m9ZGhebNUT3BlbkFJIAbrvFPh70bYnHv57Zp0")

Issue_embeddings = []

# Batch size for processing data
batch_size = 500

# Initialize data structure for storing text
data = [
    [], # Titles
]
count=0;
# Embed and insert in batches
for i in tqdm(range(0, len(df_Issues))):
    title = str(df_Issues.iloc[i]['_title']).replace("\n", "") or ''
    body = str(df_Issues.iloc[i]['_body']).replace("\n", "") or ''

    # Merge 'repository name','title' and 'body' of the GitHub Issue
    combined_text = f"Repository:{owner}/{repo} Issue Title:{title} Issue Body:{body}"
    data[0].append(combined_text)
    if len(data[0]) % batch_size == 0:
        print("Embedding batch...")

        embeddings_batch = embed(data[0])
        Issue_embeddings.extend(embeddings_batch)
        data = [[]]
        print("Waiting for 1 minute before the next batch...")

        time.sleep(60)

# Embed the remaining data if any
if len(data[0]) != 0:
    embeddings_rem = embed(data[0])
    print(len(embeddings_rem))
    Issue_embeddings.extend(embeddings_rem)
```

```
  0%|                                                                                | 0/1994 [00:00<?, ?it/s]
Embedding batch...
Waiting for 1 minute before the next batch...
 25%|████████████████                                                | 500/1994 [01:03<03:10,  7.85it/s]
Embedding batch...
Waiting for 1 minute before the next batch...
 50%|████████████████████████████████                                | 1000/1994 [02:05<02:04,  7.96it/s]
Embedding batch...
Waiting for 1 minute before the next batch...
100%|████████████████████████████████████████████████████████████████| 1994/1994 [03:07<00:00, 10.62it/s]
494
```

[17]:
```
# Configure Elasticsearch connection
from elasticsearch import Elasticsearch,helpers
es = Elasticsearch(['http://localhost:9200'])
es.ping()   #connection testing
```

[17]:
```
True
```

[ ]:

[18]:
```
#Index Mapping for githubissues

index_mapping= {
    "properties": {
      "Github_Issue_vector": {
          "type": "dense_vector",
          "dims": 1536,
          "index": "true",
          "similarity": "cosine"
      },
      "_type": {"type": "text"},
      "_repo":{"type":"text"},
      "_issueNumber": {"type": "long"},
      "_title": {"type": "text"},
      "_createdAt": {"type": "date"},
      "_closedAt": {"type": "date"},
      "_state": {"type": "text"},
      "_body": {"type": "text"}
    }
}

if es.indices.exists(index="github_issues"):
    es.indices.delete(index="github_issues")

es.indices.create(index="github_issues", body={"mappings": index_mapping})
```

[18]:
```
ObjectApiResponse({'acknowledged': True, 'shards_acknowledged': True, 'index': 'github_issues'})
```

Pull_GitHub_Issues:

[3]:
```
# To search documents

#Import Elasticsearch and helpers from  elasticsearch

from elasticsearch import Elasticsearch,helpers
import json

es = Elasticsearch(['http://localhost:9200'])
es.ping()   #connection testing
res = es.search(index="github_issues", body={"query": {"match_all": {}}})

# Extract the total hit count
print("Got %d Hits:" % res['hits']['total']['value'])

# Extract hits from the response
hits = res.get('hits', {})

# Pretty print the hits
print(json.dumps(hits, indent=2))
```


```
Got 1994 Hits:
{
  "total": {
    "value": 1994,
    "relation": "eq"
  },
  "max_score": 1.0,
  "hits": [
    {
      "_index": "github_issues",
      "_id": "mIne_o4BVFULauTgpX8C",
      "_score": 1.0,
      "_source": {
        "_type": "issue",
        "_repo": "openai-cookbook",
        "_issueNumber": "1161",
        "_title": "Update registry.yaml",
        "_createdAt": "2024-04-19T18:32:11Z",
```


[4]:
```
hits['hits'][5]['_source']  # Choose an Issue from Issues in repository
```

[4]:

```
{'_type': 'issue',
 '_repo': 'openai-cookbook',
 '_issueNumber': '1156',
 '_title': 'Codespace stunning space umbrella jjg7w544957fq7vq',
 '_createdAt': '2024-04-18T04:23:21Z',
 '_closedAt': '2024-12-31T00:36:30Z',
 '_state': 'open',
 '_body': '## Summary\r\n\r\nBriefly describe the changes and the goal of this PR. Make sure the PR title summarizes the changes effectively.\r\n\r\n
## Motivation\r\n\r\nWhy are these changes necessary? How do they improve the cookbook?\r\n\r\n---\r\n\r\n## For new content\r\n\r\nWhen contributing
new content, read through our [contribution guidelines](https://github.com/openai/openai-cookbook/blob/main/CONTRIBUTING.md), and mark the following
action items as completed:\r\n\r\n- [ ] I have added a new entry in [registry.yaml](https://github.com/openai/openai-cookbook/blob/main/registry.yam
l) (and, optionally, in [authors.yaml](https://github.com/openai/openai-cookbook/blob/main/authors.yaml)) so that my content renders on the cookbook
website.\r\n- [x] I have conducted a self-review of my content based on the [contribution guidelines](https://github.com/openai/openai-cookbook/blob/
main/CONTRIBUTING.md#rubric):\r\n  - [ ] Relevance: This content is related to building with OpenAI technologies and is useful to others.\r\n  - [ ]
Uniqueness: I have searched for related examples in the OpenAI Cookbook, and verified that my content offers new insights or unique information compa
red to existing documentation.\r\n  - [ ] Spelling and Grammar: I have checked for spelling or grammatical mistakes.\r\n  - [ ] Clarity: I have done
a final read-through and verified that my submission is well-organized and easy to understand.\r\n  - [ ] Correctness: The information I include is c
orrect and all of my code executes successfully.\r\n  - [ ] Completeness: I have explained everything fully, including all necessary references and c
```


[6]:
```
# We get Issues that are similar to the Issue chosen and sorted based on score
# First result is the most relevant and has the score 1.0
for response in responses:
    print(response)
    print()
```

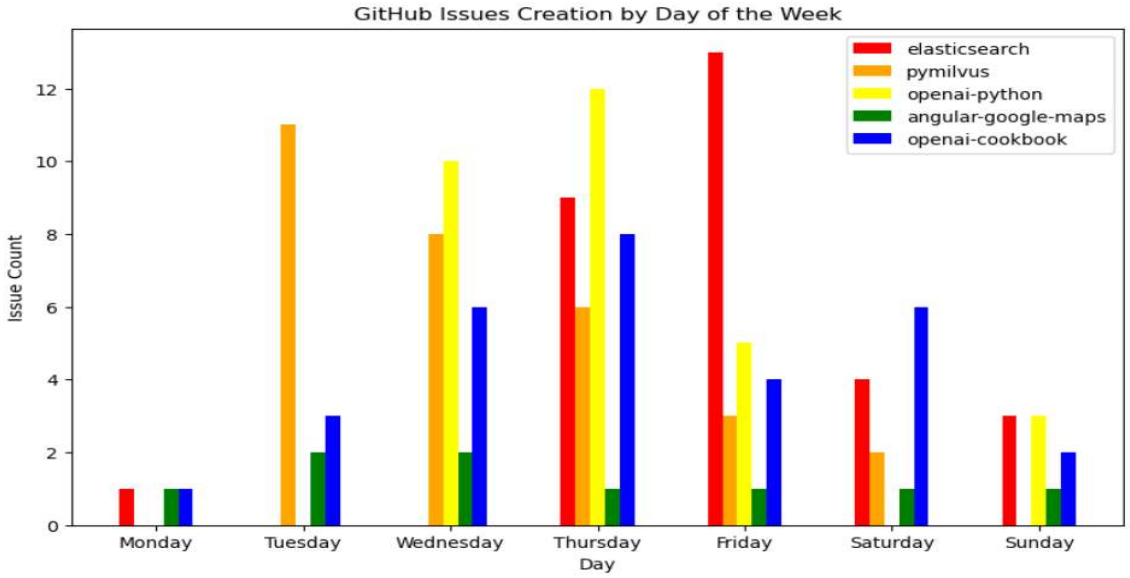

```
stry.yaml](https://github.com/openai/openai-cookbook/blob/main/registry.yaml) (and, optionally, in [authors.yaml](https://github.com/openai/openai-co
okbook/blob/main/authors.yaml)) so that my content renders on the cookbook website.\r\n- [x] I have conducted a self-review of my content based on th
e [contribution guidelines](https://github.com/openai/openai-cookbook/blob/main/CONTRIBUTING.md#rubric):\r\n  - [ ] Relevance: This content is relate
d to building with OpenAI technologies and is useful to others.\r\n  - [ ] Uniqueness: I have searched for related examples in the OpenAI Cookbook, a
nd verified that my content offers new insights or unique information compared to existing documentation.\r\n  - [ ] Spelling and Grammar: I have che
cked for spelling or grammatical mistakes.\r\n  - [ ] Clarity: I have done a final read-through and verified that my submission is well-organized and
easy to understand.\r\n  - [ ] Correctness: The information I include is correct and all of my code executes successfully.\r\n  - [ ] Completeness: I
have explained everything fully, including all necessary references and citations.\r\n\r\nWe will rate each of these areas on a scale from 1 to 4, an
d will only accept contributions that score 3 or higher on all areas. Refer to our [contribution guidelines](https://github.com/openai/openai-cookboo
k/blob/main/CONTRIBUTING.md) for more details.\r\n'}

{'_score': 0.96706605, '_type': 'issue', '_repo': 'openai-cookbook', '_issueNumber': '1155', '_title': 'Initial commit', '_createdAt': '2024-04-17T1
4:37:36Z', '_closedAt': '2024-04-18T16:18:18Z', '_body': '## Summary\r\n\r\nBriefly describe the changes and the goal of this PR. Make sure the PR ti
tle summarizes the changes effectively.\r\n\r\n\r\n## Motivation\r\n\r\nWhy are these changes necessary? How do they improve the cookbook?\r\n\r\n---\r\n
\r\n## For new content\r\n\r\n\r\nWhen contributing new content, read through our [contribution guidelines](https://github.com/openai/openai-cookbook/blo
b/main/CONTRIBUTING.md), and mark the following action items as completed:\r\n\r\n- [ ] I have added a new entry in [registry.yaml](https://github.co
```

Analytics Script:

Requirement – 1 Output:

```
    ax.set_xlabel("Day")
    ax.set_ylabel("Issue Count")
    plt.show()
display_weekly_issue_distribution(weekly_data)
```



Requirement – 2 Output:

```
Repository: openai-cookbook
Issue 1: Codespace stunning space umbrella jjg7w544957fq7vq - Score: 5.1836243
Issue 2: Initial commit - Score: 5.1506906
Issue 3: H w - Score: 5.1504526
Issue 4: Evals conclusion - Score: 5.1420755
Issue 5: Eval Registry - Score: 5.1417246
Issue 6: Update registry.yaml - Score: 4.1836243
Issue 7: [FEATURE] - Score: 4.1836243
Issue 8: **** - Score: 4.1836243
Issue 9: ![c519aebd-8614-4b45-8afa-e8e6fac2ef07](https://github.com/openai/openai-cookbook/assets/166670647/707f943a-73a1-49d3-83e8-a1191e255d8a) - Sc
ore: 4.1836243
Issue 10: ![20240417-164047](https://github.com/openai/openai-cookbook/assets/166670647/2db64bdf-698d-4a63-9a15-cccd69977877) - Score: 4.1836243


Repository: elasticsearch
Issue 1: Codespace stunning space umbrella jjg7w544957fq7vq - Score: 1.0
Issue 2: Initial commit - Score: 0.96706605
Issue 3: H w - Score: 0.96682817
Issue 4: Evals conclusion - Score: 0.95845085
Issue 5: Eval Registry - Score: 0.95810014
Issue 6: Fix monitoring-es-mb.json - Score: 0.08074688
Issue 7: Document behaviour of `SubscribableListener` on rejection - Score: 0.08074688
Issue 8: Muting DownsampleActionIT testRollupNonTSIndex - Score: 0.08074688
Issue 9: [CI] AzureBlobStoreRepositoryTests testRequestStats failing - Score: 0.08074688
Issue 10: Muting some DivTests failing tests - Score: 0.08074688


Repository: openai-python
Issue 1: chore(types): include discriminators in unions - Score: 4.5225544
Issue 2: chore(internal): improve deserialisation of discriminated unions - Score: 4.5225544
Issue 3: feat(cli): add support for fine_tuning.jobs - Score: 4.5225544
Issue 4: chore: export NOT_GIVEN sentinel value - Score: 4.5225544
Issue 5: chore(internal): support parsing Annotated types - Score: 4.5225544
Issue 6: chore(internal): bump pyright - Score: 4.5225544
Issue 7: Incompatible: `with_streaming_response` `stream_to_file` `response_format='aac'` - Score: 4.5225544
Issue 8: chore(internal): add core support for deserializing into number response - Score: 4.5225544
Issue 9: fix(streaming): improve error messages - Score: 4.5225544
Issue 10: Messages with non-latin languages texts returns server errors (500 status code) - Score: 4.5225544


Repository: pymilvus
Issue 1: Codespace stunning space umbrella jjg7w544957fq7vq - Score: 1.0
Issue 2: Initial commit - Score: 0.96706605
Issue 3: H w - Score: 0.96682817
Issue 4: Evals conclusion - Score: 0.95845085
Issue 5: Eval Registry - Score: 0.95810014


Repository: angular-google-maps
Issue 1: Codespace stunning space umbrella jjg7w544957fq7vq - Score: 1.0
Issue 2: Initial commit - Score: 0.96706605
Issue 3: H w - Score: 0.96682817
Issue 4: Evals conclusion - Score: 0.95845085
Issue 5: Eval Registry - Score: 0.95810014
```

```
Issue URL: https://api.github.com/repos/openai/openai-cookbook/issues/1161
  Similar Issue URL: https://api.github.com/repos/openai/openai-cookbook/issues/1140, Similarity Score: 0.19410538199503427
  Similar Issue URL: https://api.github.com/repos/openai/openai-cookbook/issues/1131, Similarity Score: 0.1328772404372487
  Similar Issue URL: https://api.github.com/repos/openai/openai-cookbook/issues/1147, Similarity Score: 0.12383576830835173
  Similar Issue URL: https://api.github.com/repos/openai/openai-cookbook/issues/1137, Similarity Score: 0.12091448989540268
  Similar Issue URL: https://api.github.com/repos/openai/openai-cookbook/issues/1154, Similarity Score: 0.11774072238252697
```

Analytics Script:

```
Issue URL: https://api.github.com/repos/elastic/elasticsearch/issues/107666
  Similar Issue URL: https://api.github.com/repos/elastic/elasticsearch/issues/107661, Similarity Score: 0.13183719996084844
  Similar Issue URL: https://api.github.com/repos/elastic/elasticsearch/issues/107662, Similarity Score: 0.11312517057906255
  Similar Issue URL: https://api.github.com/repos/elastic/elasticsearch/issues/107645, Similarity Score: 0.07735961618775425
  Similar Issue URL: https://api.github.com/repos/elastic/elasticsearch/issues/107646, Similarity Score: 0.06989010310364346
  Similar Issue URL: https://api.github.com/repos/elastic/elasticsearch/issues/107664, Similarity Score: 0.06892534656363378

Issue URL: https://api.github.com/repos/openai/openai-python/issues/1348
  Similar Issue URL: https://api.github.com/repos/openai/openai-python/issues/1342, Similarity Score: 0.6183330369057484
  Similar Issue URL: https://api.github.com/repos/openai/openai-python/issues/1335, Similarity Score: 0.23364063972074936
  Similar Issue URL: https://api.github.com/repos/openai/openai-python/issues/1339, Similarity Score: 0.2011644028411152
  Similar Issue URL: https://api.github.com/repos/openai/openai-python/issues/1349, Similarity Score: 0.1760216764266032
  Similar Issue URL: https://api.github.com/repos/openai/openai-python/issues/1325, Similarity Score: 0.1660989129261239

Issue URL: https://api.github.com/repos/milvus-io/pymilvus/issues/2040
  Similar Issue URL: https://api.github.com/repos/milvus-io/pymilvus/issues/2024, Similarity Score: 0.2328811991921522
  Similar Issue URL: https://api.github.com/repos/milvus-io/pymilvus/issues/2041, Similarity Score: 0.17026325416464042
  Similar Issue URL: https://api.github.com/repos/milvus-io/pymilvus/issues/2033, Similarity Score: 0.14959849300484573
  Similar Issue URL: https://api.github.com/repos/milvus-io/pymilvus/issues/2044, Similarity Score: 0.12536005050174517
  Similar Issue URL: https://api.github.com/repos/milvus-io/pymilvus/issues/2032, Similarity Score: 0.11402518217225054

Issue URL: https://api.github.com/repos/sebholstein/angular-google-maps/issues/2034
  Similar Issue URL: https://api.github.com/repos/sebholstein/angular-google-maps/issues/2047, Similarity Score: 0.2682738041880502
  Similar Issue URL: https://api.github.com/repos/sebholstein/angular-google-maps/issues/2044, Similarity Score: 0.22716729870668176
  Similar Issue URL: https://api.github.com/repos/sebholstein/angular-google-maps/issues/1946, Similarity Score: 0.21283289964784025
  Similar Issue URL: https://api.github.com/repos/sebholstein/angular-google-maps/issues/2046, Similarity Score: 0.19660872807692284
  Similar Issue URL: https://api.github.com/repos/sebholstein/angular-google-maps/issues/1890, Similarity Score: 0.10127174084703525
```

LOCAL HOST 9200 WEBSITE: