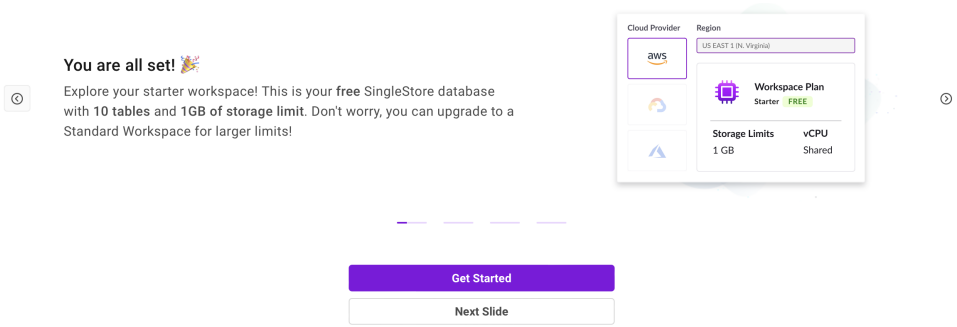
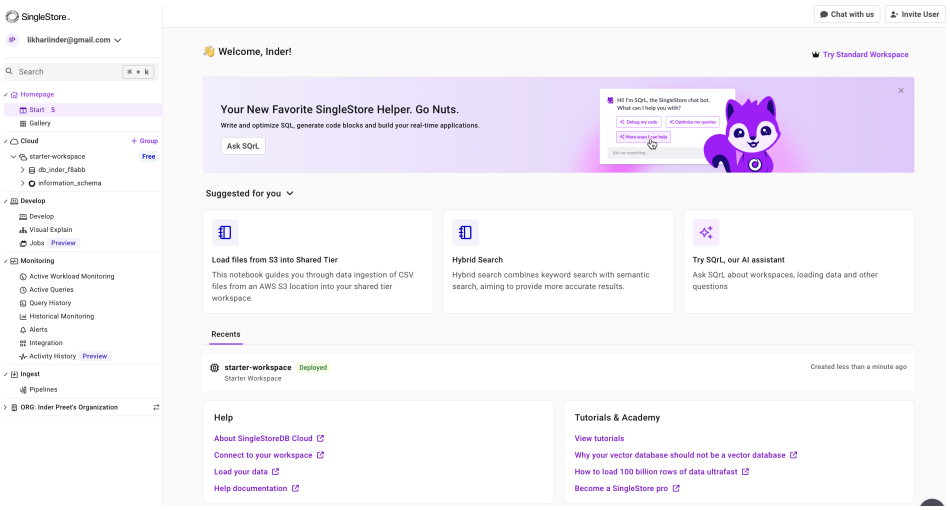
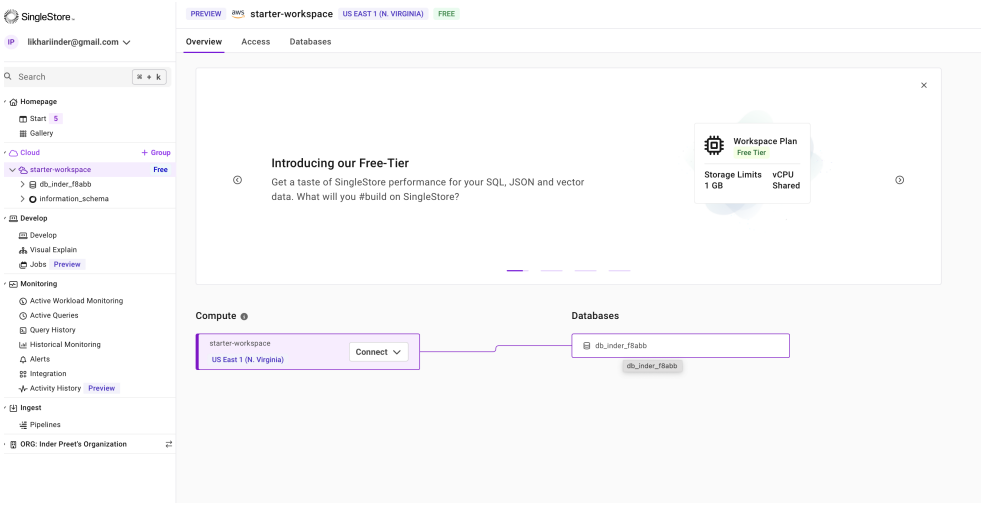
03- Storing Embedding in Vector DB and searching it

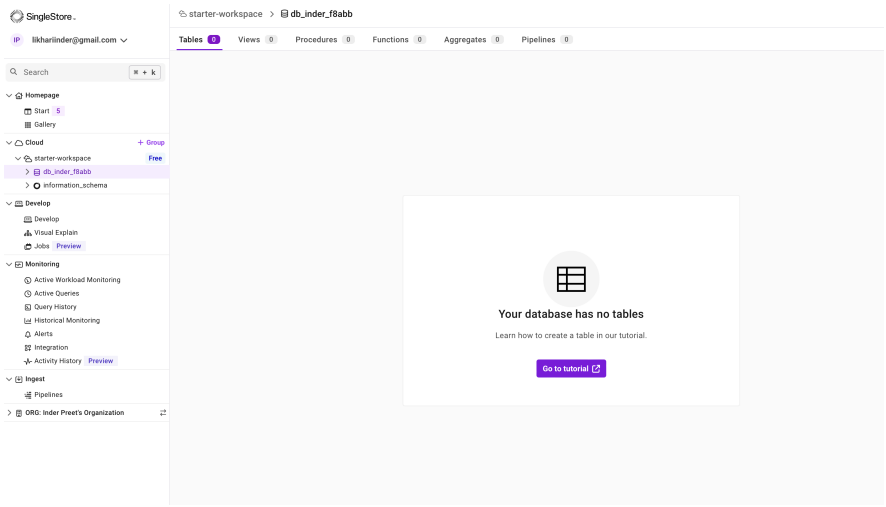
1- setup an account in https://www.singlestore.com/ (to use as your vector DB) . it is free and comes with credit.



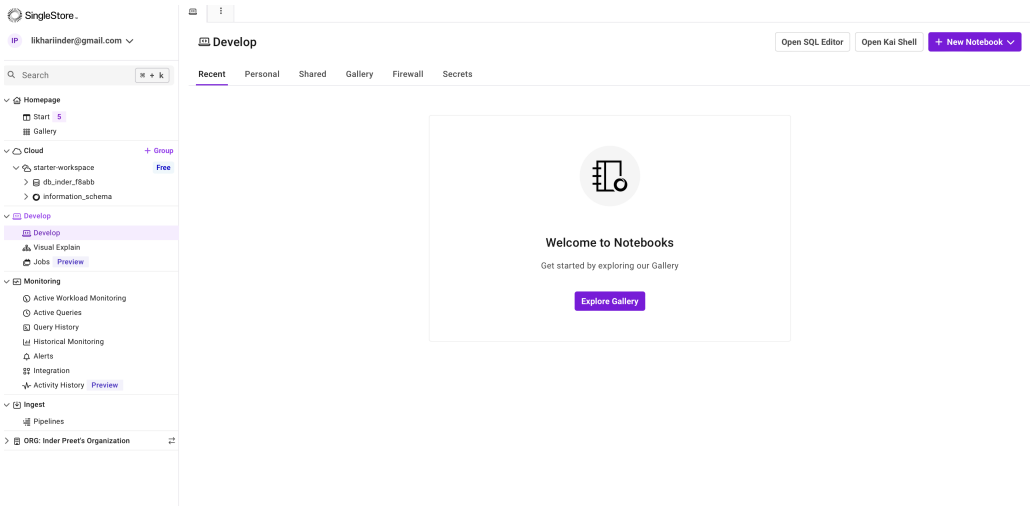
create your account. A new workspace and database would have been created for you automatically. As seen, the Database is empty as of now.



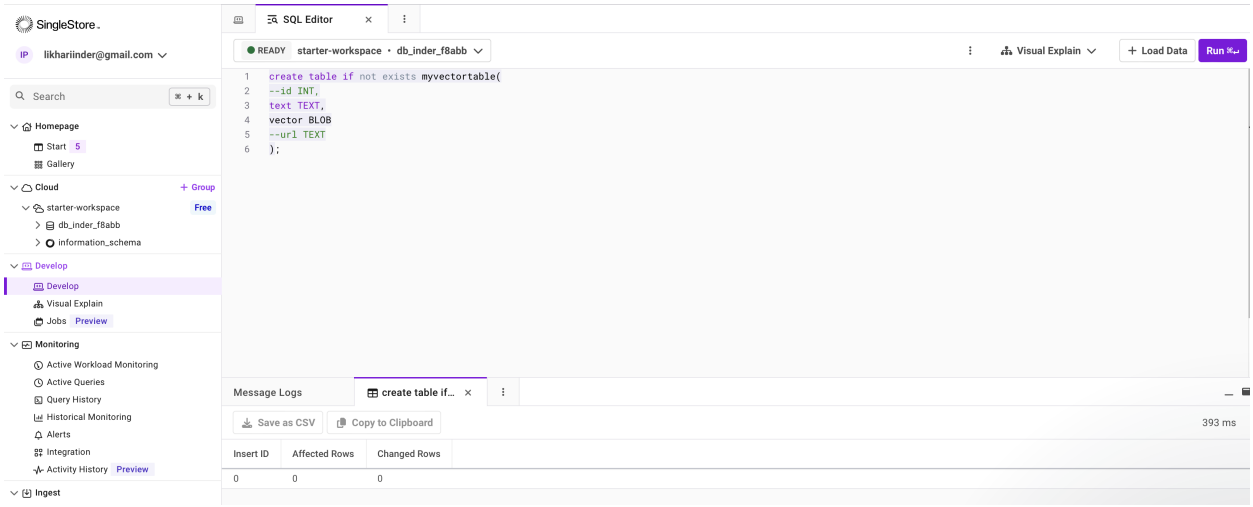




2- click on develop and select Open sql editor(top right)



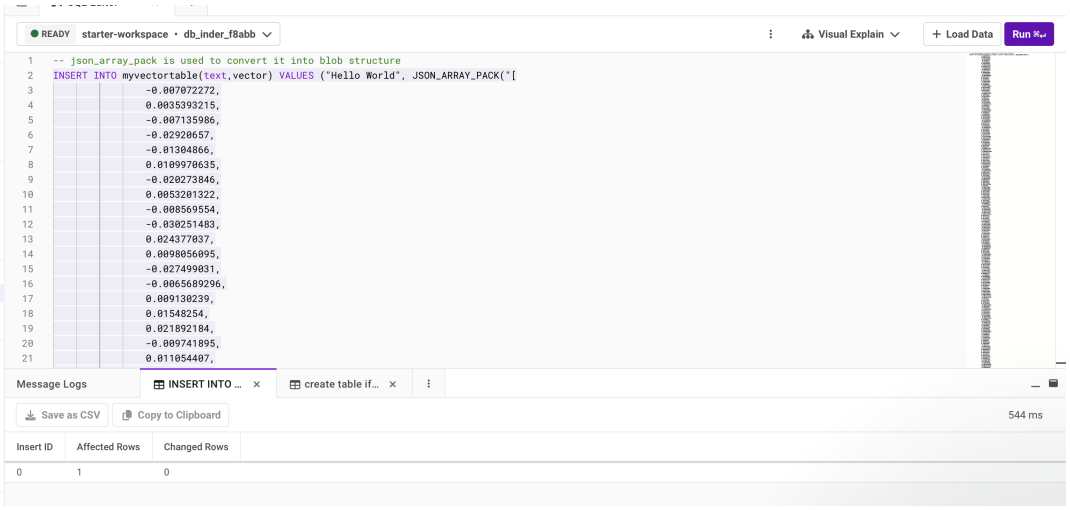
3- Create a table like below. (remove the commented lines while running)



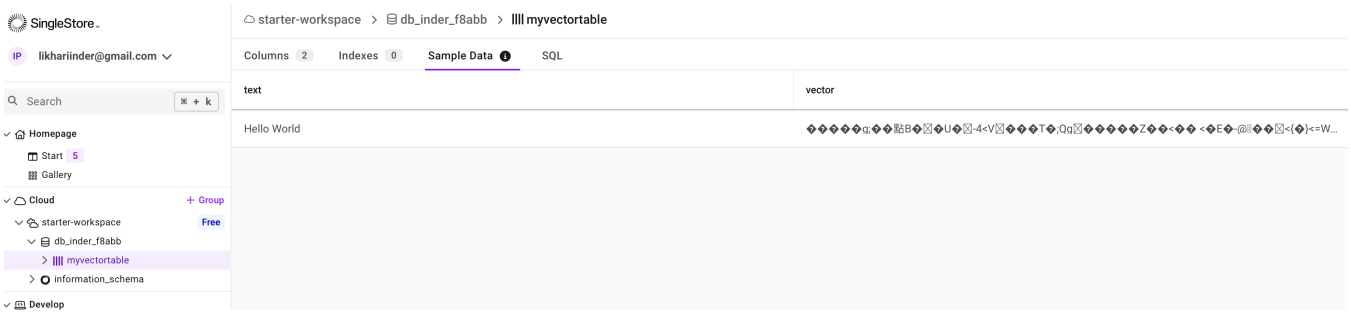

```
create table if not exists myvectortable(text TEXT,vector BLOB);
```

4- Add Sample Data in the table

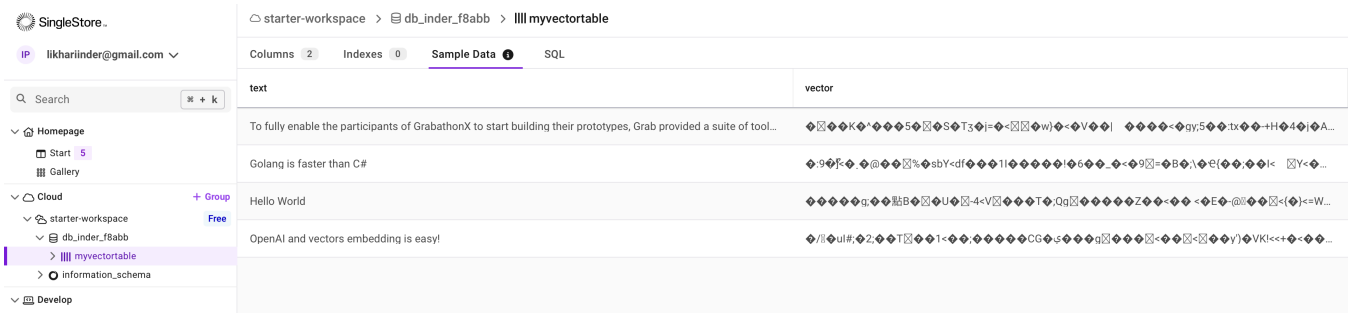
Add the embedding data between the strings



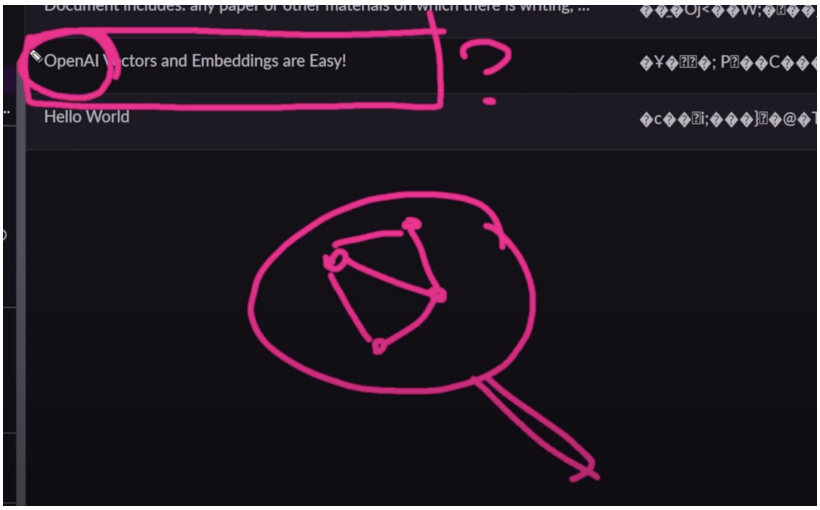
Now you can click on your DB and see the record present in the table.



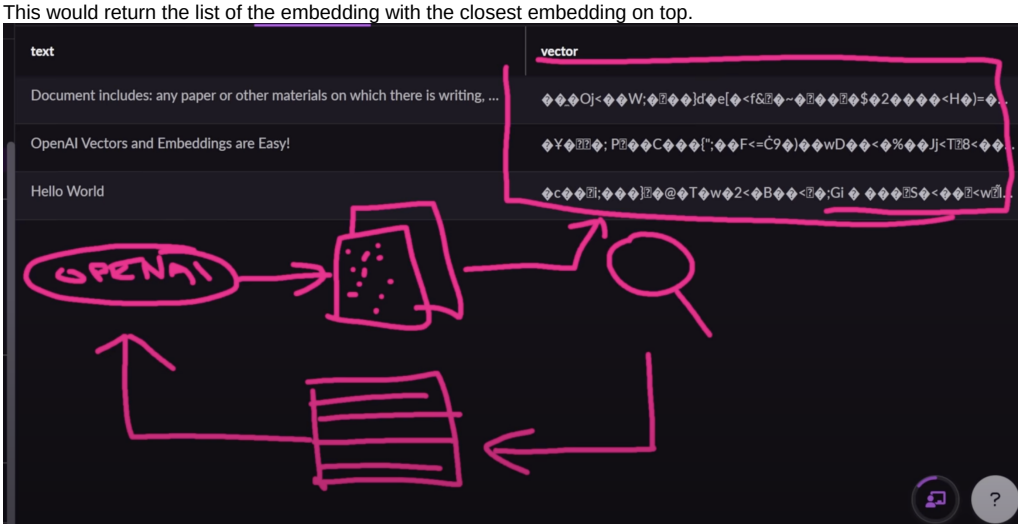
5- Generate more embeddings of different text and add the data in the table



How would search work?



Here, suppose we want to search for OpenAI. Then we would first create the embedding of OpenAI. We would then search that embedding with the vector stored in the DB
This would return the list of the embedding with the closest embedding on top.

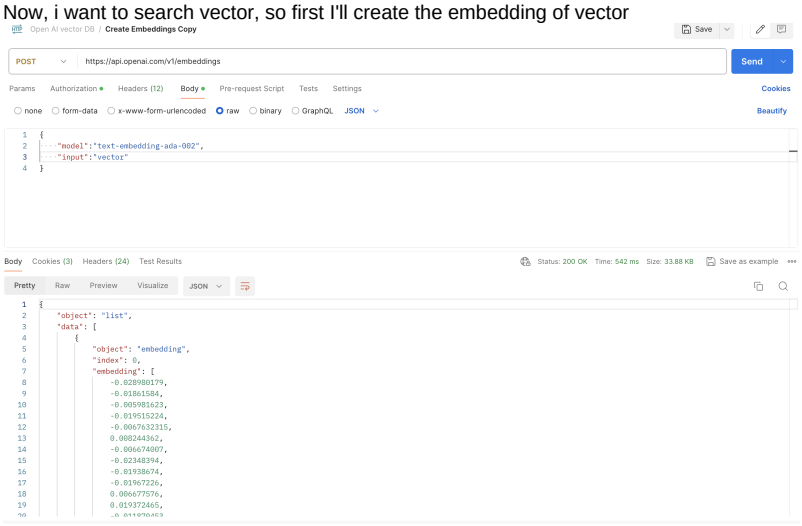


Example of how to search

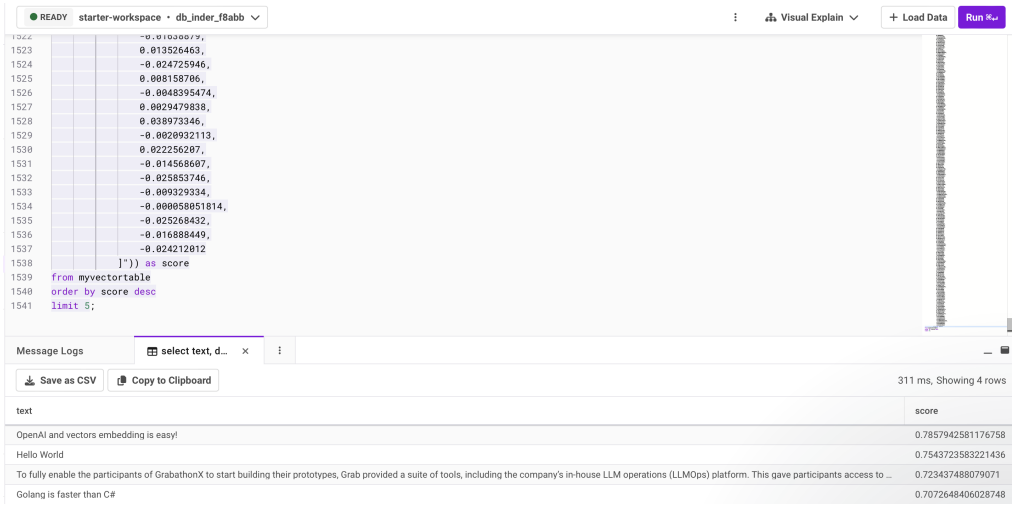
Below is the sql query to search:

```
select text, dot_product(vector, JSON_ARRAY_PACK("[]") as score
from myvectortable
order by score desc
limit 5;
```

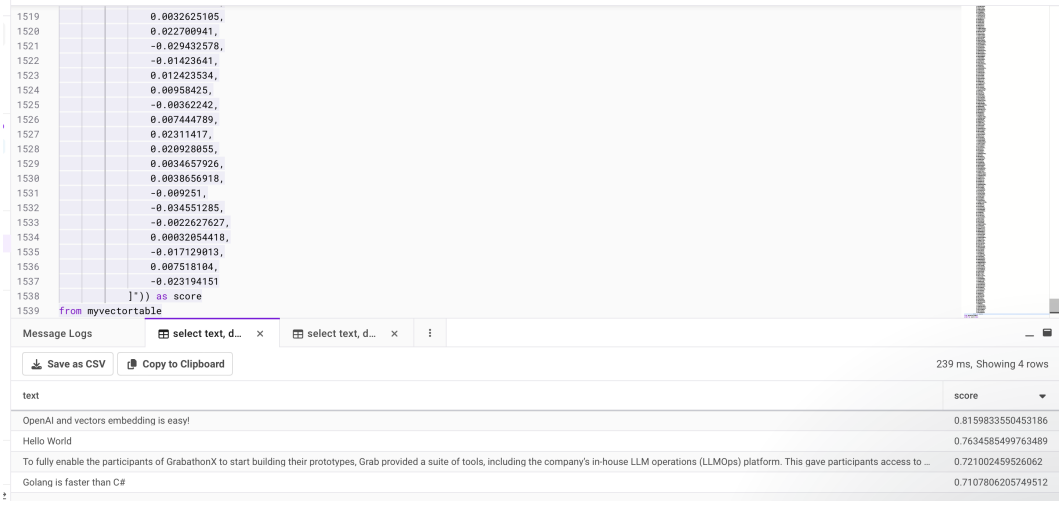
Now, i want to search vector, so first I'll create the embedding of vector



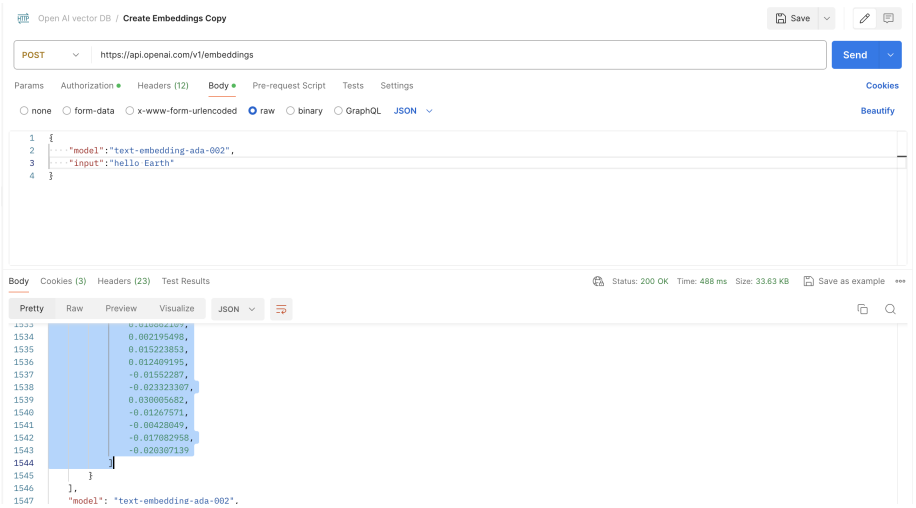
I'll then run the sql query with the vector embedding .



Try with "vectors" and the score result changes.



Tried with "hello Earth" and see how it changes.


Open AI vector DB / Create Embeddings Copy
Save
POST
https://api.openai.com/v1/embeddings
Send
Params
Authorization
Headers (12)
Body
Pre-request Script
Tests
Settings
Cookies
none
form-data
x-www-form-urlencoded
raw
binary
GraphQL
JSON
Beautify
{
"model":"text-embedding-ada-002",
"input":"hello Earth"
}
Body
Cookies (3)
Headers (23)
Test Results
Status: 200 OK
Time: 488 ms
Size: 33.63 KB
Save as example
Pretty
Raw
Preview
Visualize
JSON
0.002195498,
0.015223853,
0.012409195,
-0.01552287,
-0.023323307,
0.030005682,
-0.01267571,
-0.00428049,
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-0.020307139
]
}
],
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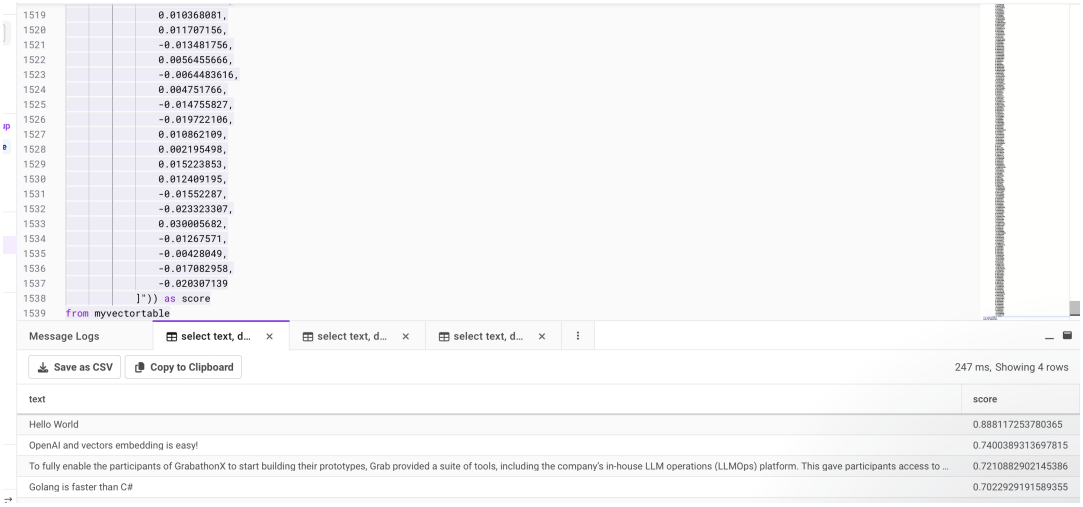
0.010368081,
0.011707156,
-0.013481756,
0.0056455666,
-0.0064483616,
0.004751766,
-0.014755827,
-0.019722106,
0.010862109,
0.002195498,
0.015223853,
0.012409195,
-0.01552287,
-0.023323307,
0.030005682,
-0.01267571,
-0.00428049,
-0.017082958,
-0.020307139
])) as score
from myvectortable
Message Logs
select text, d...
select text, d...
select text, d...
Save as CSV
Copy to Clipboard
247 ms, Showing 4 rows
text
score
Hello World
0.888117253780365
OpenAI and vectors embedding is easy!
0.7400389313697815
To fully enable the participants of GrabathonX to start building their prototypes, Grab provided a suite of tools, including the company's in-house LLM operations (LLMOps) platform. This gave participants access to ...
0.7210882902145386
Golang is faster than C#
0.7022929191589355