

PharmaLlama

Made with ❤️ using Llama model



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Meet The Team!



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Combining our expertise,
we tackled

Accurate clinical notes
generation from EHR data



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Solving this problem could mean:

Reducing time on chart review by 16 minutes

Boost patient interaction time by 30%.

Increase documentation accuracy by 25%.



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We propose:

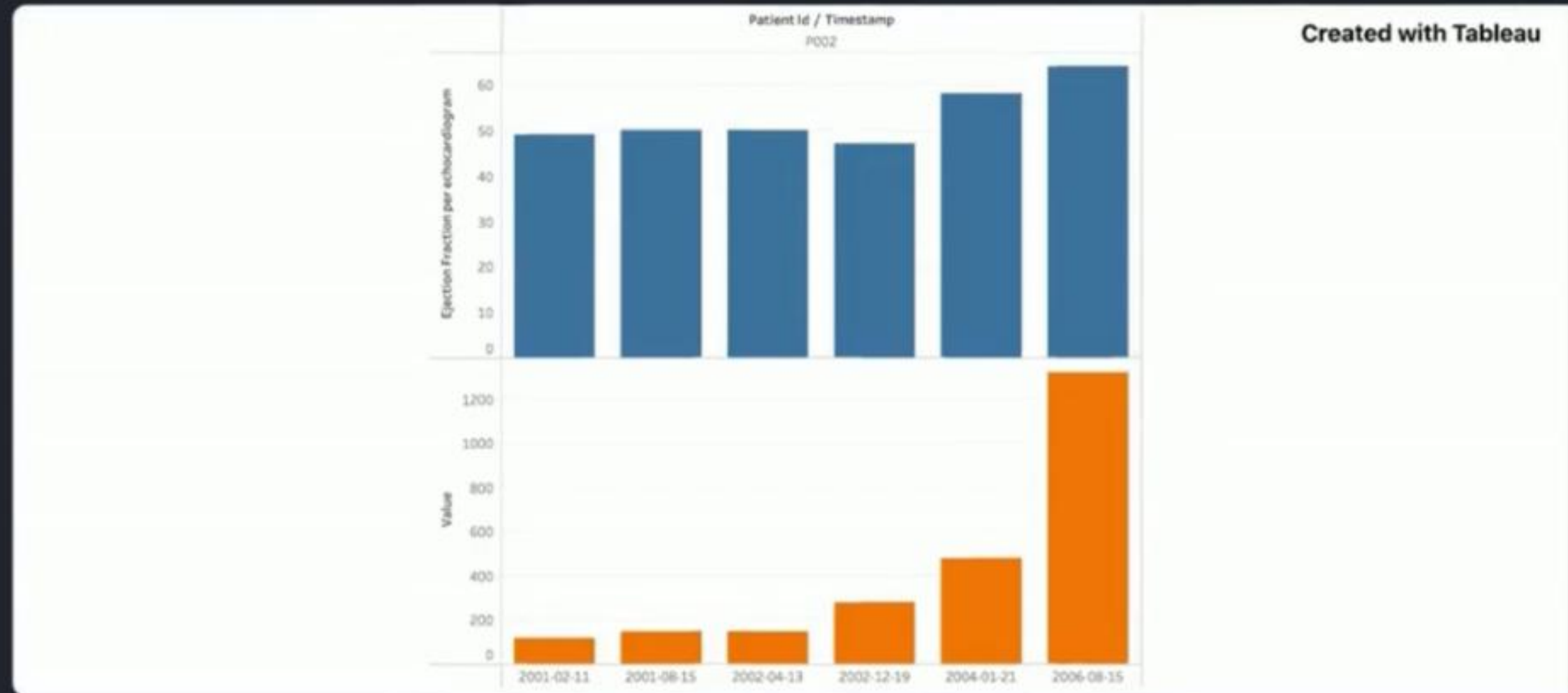
PharmaLlama

A gen-AI solution to EHR data
summarization



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Charts Analysis over time for Heart related tests



Summarize the records

Summarised Health Report

Admission Details:

Admission Date	Discharge Date	Chief Complaint - CC
2001-02-11	2001-02-11	Chest pain
2001-08-15	2001-08-15	Chest pain, shortness of breath, fatigue
2002-04-13	2002-04-13	Chest pain, shortness of breath, fatigue
2002-12-19	2002-12-19	Shortness of breath, fatigue
2004-01-21	2004-01-21	Chest pain

Summarized Information:

Admitting Service: Medicine

History of Present Illness - HPI: Patient presented with chest pain and shortness of breath.

Diagnostic tests revealed abnormalities indicating potential coronary artery disease. Subsequent visits showed progression with symptoms of fatigue. Lifestyle changes recommended.

hacklitycs

EXPLORER

- hacklitycs-24
 - ehr-ui
 - team
 - .gitignore
 - flowchart.png
 - heartdata.json
 - knowledge_base.txt
 - knowledge-base.py_ M
 - README.md
 - script.py
 - files.zip
 - heartdata.json
 - package-lock.json
 - Screen Shot 2024-02-10 a...

App.js 1, M knowledge-base.lpynb M X

hacklitycs-24 knowledge-base.lpynb M+Converting chunks into embeddings > # from langchain_pinecone imp

+ Code + Markdown | Run All | Clear All Outputs | Outline | Select Kernel

```
# %pip install --upgrade --quiet langchain-pinecone langchain-openai langchain
# %pip install --upgrade --quiet langchain sentence_transformers
# %pip install --upgrade --quiet get4all > /dev/null
```

Python

```
from langchain.text_splitter import CharacterTextSplitter
from langchain_community.document_loaders import TextLoader
from langchain_community.embeddings import HuggingFaceEmbeddings

embeddings = HuggingFaceEmbeddings(model_name="all-MiniLM-L6-v2")
```

Python

... /usr/local/lib/python3.8/site-packages/torch/_utils.py:811: UserWarning: TypedStorage is deprecated
return self.fget.__get__(instance, owner)()

Breaking down context into chunks

```
f = open("../knowledge_base.txt", "r")
content = f.read()

chunks = content.split("\n\n")
chunks

res = embeddings.embed_documents(chunks)
len(res), len(res[0])
```

Python

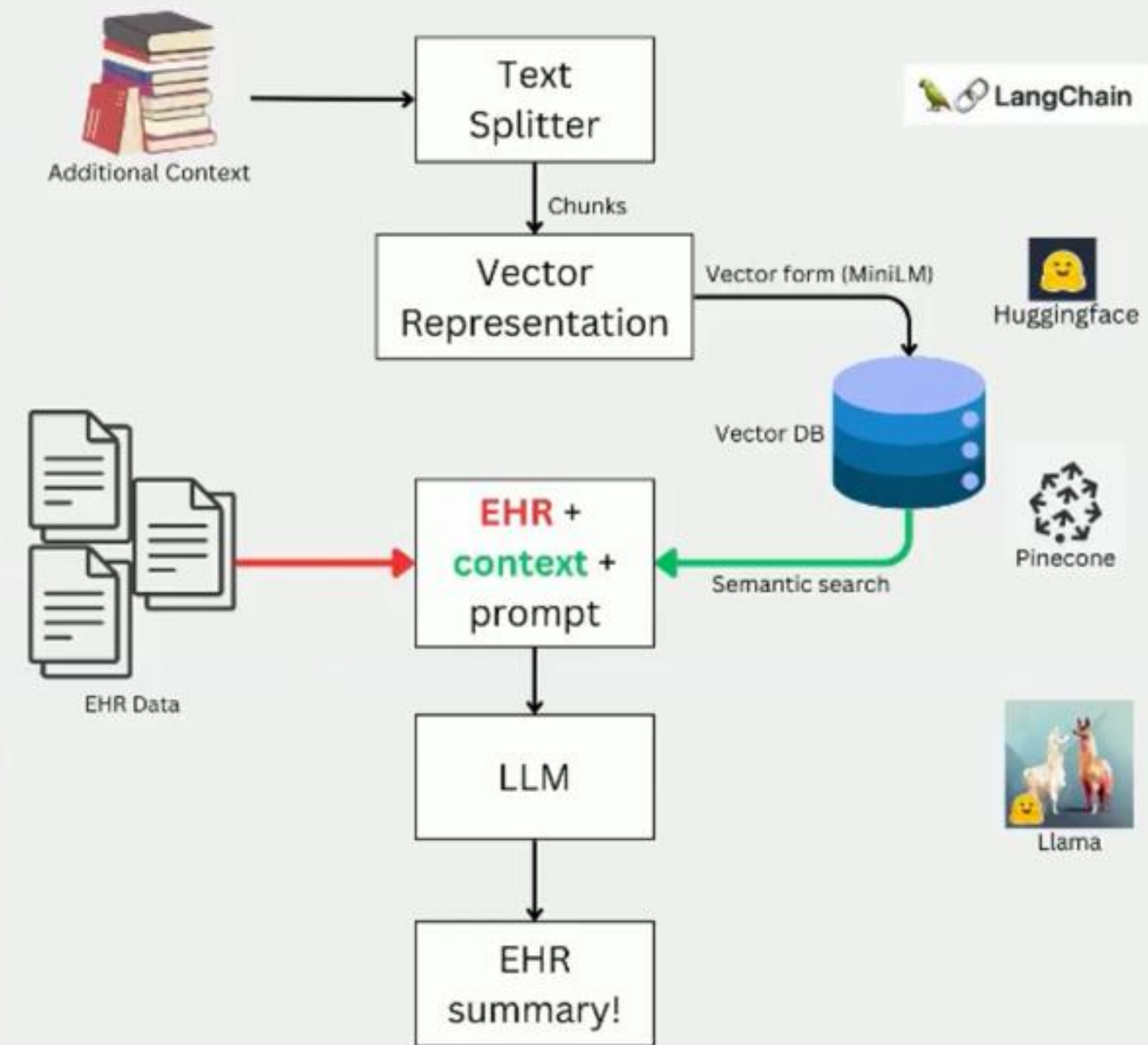
... (22, 384)

Converting chunks into embeddings

```
# from langchain_pinecone import Pinecone
from pinecone import Pinecone
from pinecone import PodSpec

api_key = "2b6a8552-7fae-43bb-af69-e89080e154f5"
environment = "gcp-starter"

pc = Pinecone(api_key=api_key)
spec = PodSpec(environment=environment)
```



Pinecone Console | React App

app.pinecone.io/organizations/-NbQu8B1...

Portfolio Ideas | job sites | Summer Learning | remotask | arpan | Assistantship | Mind Luster

Pinecone

PROJECTS >

- Starter
- Indexes
- API Keys
- Members

Docs | Support Center

Rohan Bera's Org

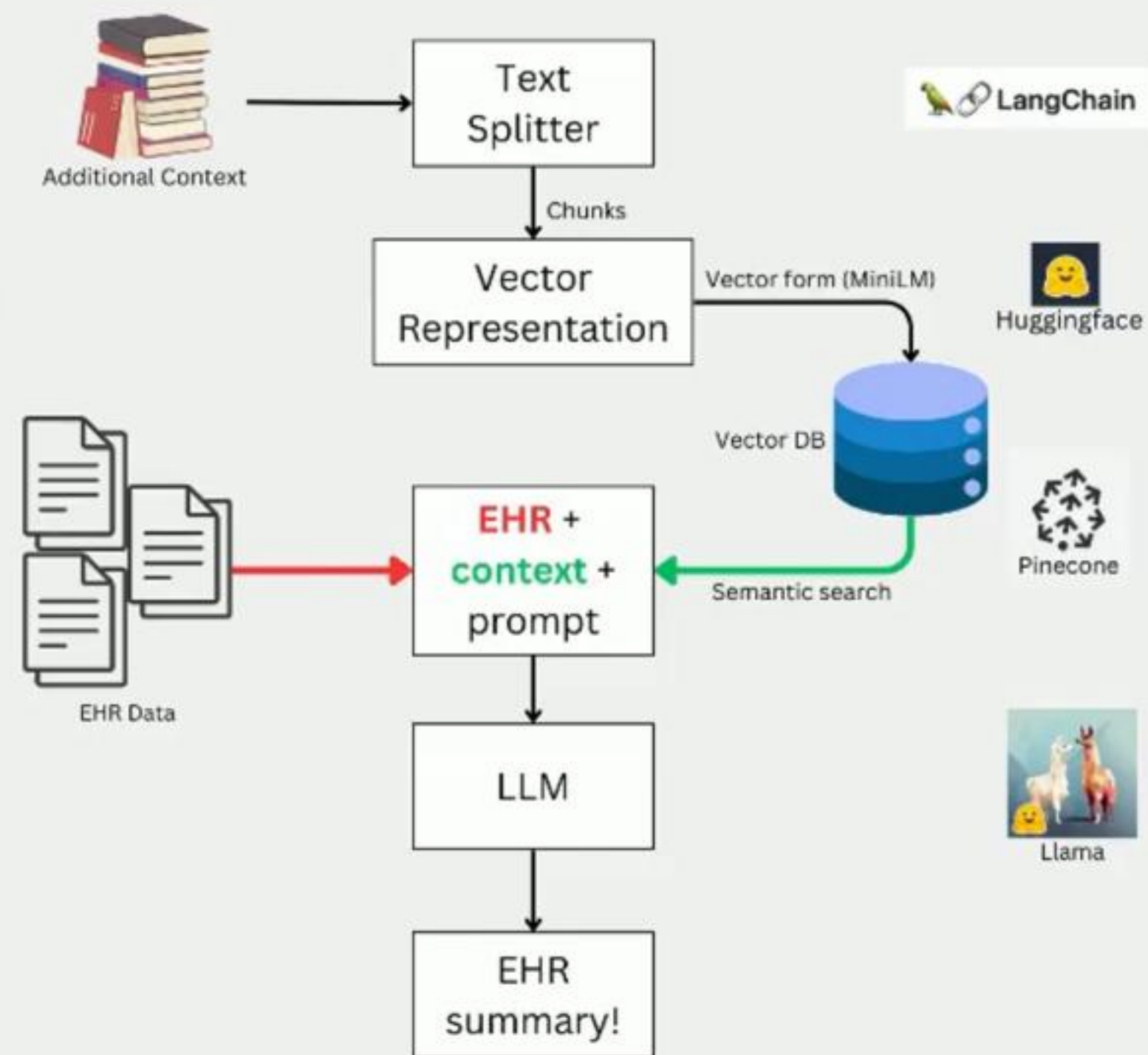
Settings

Upgrade

Starter Indexes

Unlock \$100 in serverless credits | RB

BROWSER	METRICS	NAMESPACES (1)
1	ID b9d...	VALUES -0.118838422, ...
SCORE 1.0005	METADATA text: "\nEjection Fraction;\nNormal: 50-70%\nMil...	
2	ID da1b...	VALUES -0.118838422, ...
SCORE 1.0005	METADATA text: "\nCholesterol Levels;\nDesirable: Under 20...	
3	ID 3e5...	VALUES -0.118838422, ...
SCORE 1.0005	METADATA text: "\nTroponin (ng/mL);\n- Good: <0.01 \n- Mo...	
4	ID de2...	VALUES -0.118838422, ...
SCORE 1.0005	METADATA	



Future plans

Integrate rule engine for enhanced decision-making.

Test on extensive datasets for robustness

Explore advanced models for improved performance.

Implement cronjob for scheduled summary generation.

Optimize with batch processing for efficiency and scalability.



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