DiskusAI

Discussions Forum powered by AI

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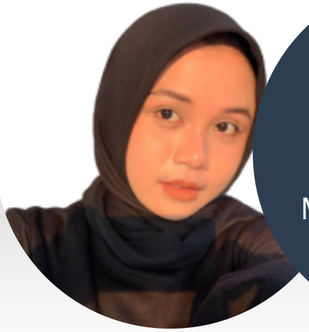
Meet Our Team

Azzam Alhanafi

Machine Learning



Safira Raissa

Machine Learning

Marcella Sintauly

Machine Learning

Dewi Arumsari

Machine Learning

Antonio Passaka

Cloud Computing

Shafaa Budi Aulia

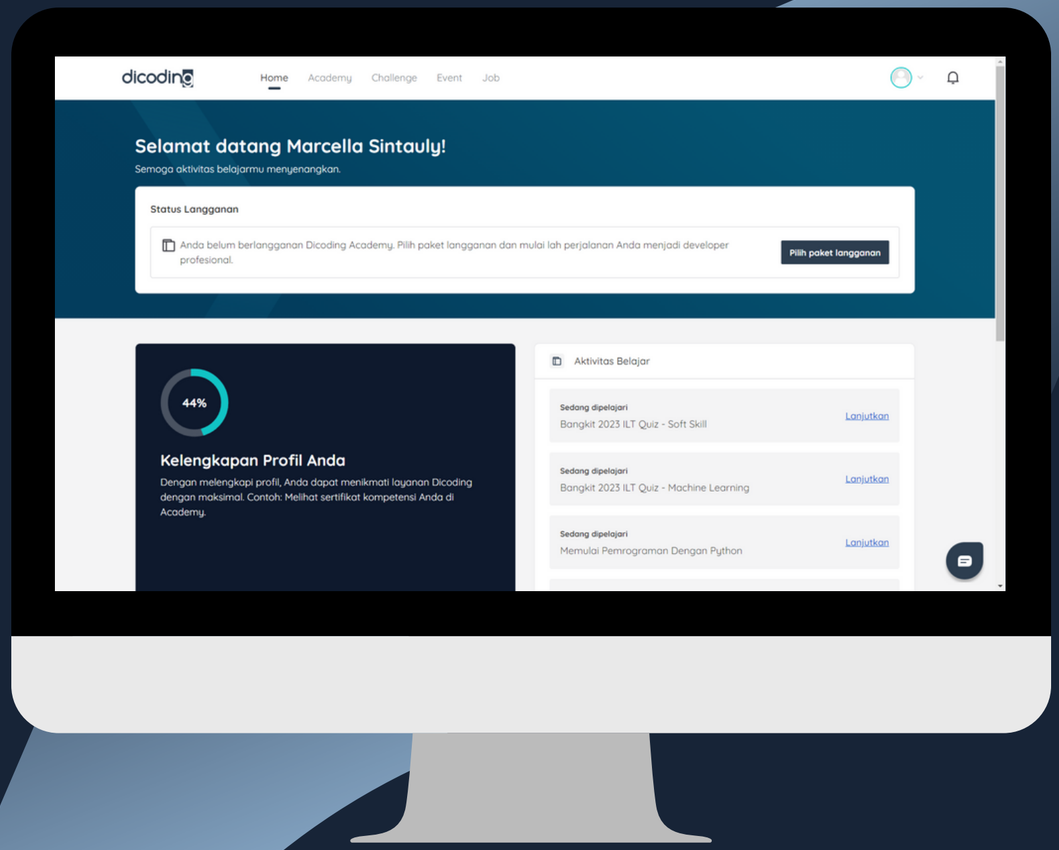
Cloud Computing

Background

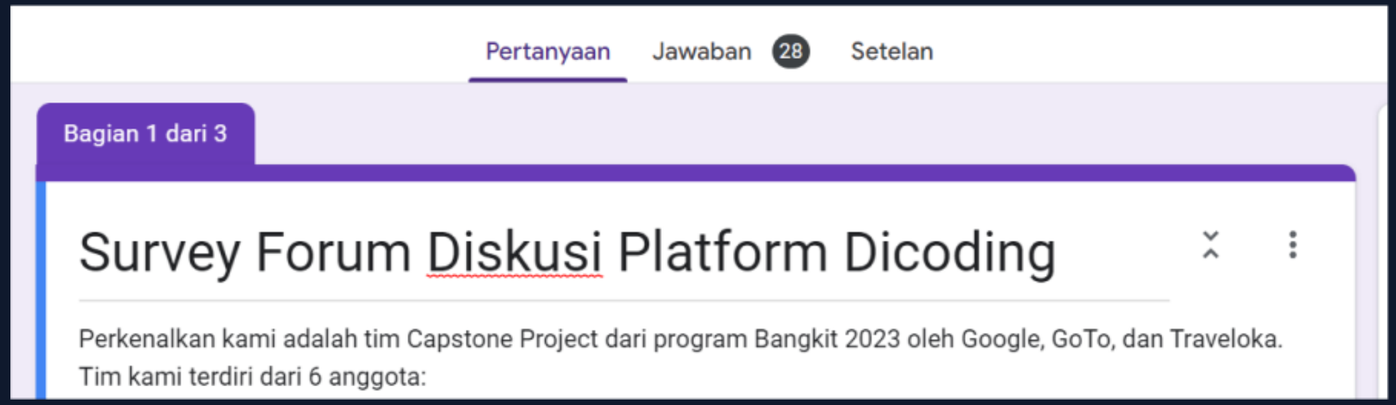
Why is this problem interesting for our team?

Dicoding is **one of the largest online tech course** in Indonesia with high quality courses and large of community.

But its chatbot and discussion forum still use traditional queries, **resulting in irrelevant responses**. We are eager to resolve this issue.



We did a survey!

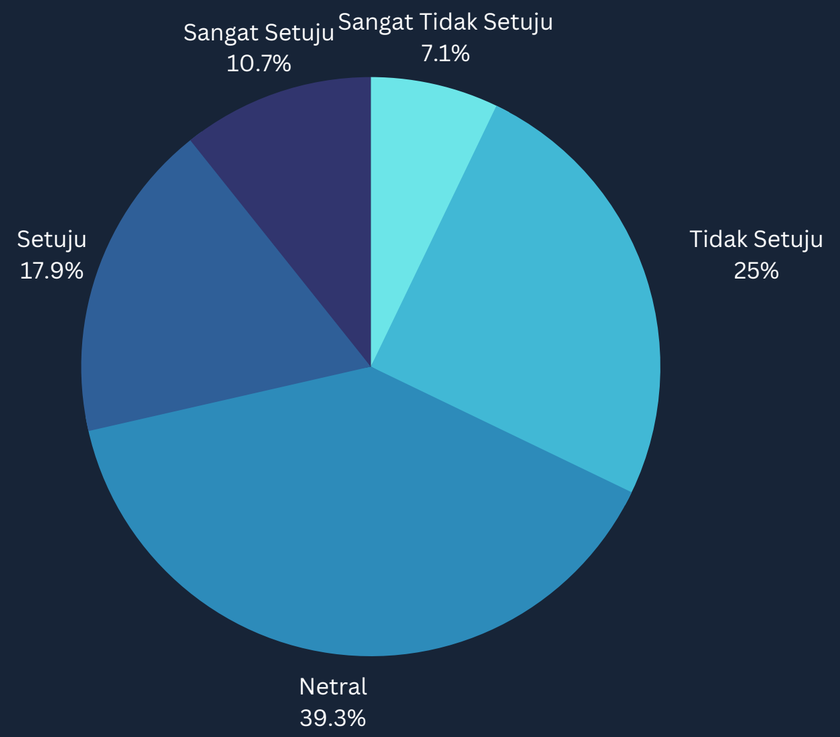


We took 28 respondents that have already finished at least one course of dicoding and here are what we've got ...

Reason

There are still 1/3 user find that Dicoding 's chatbot (Dibantu) didn't effectively answer their question

Fitur chatbot pada platform Dicoding (dibantu) sudah efektif



Reason

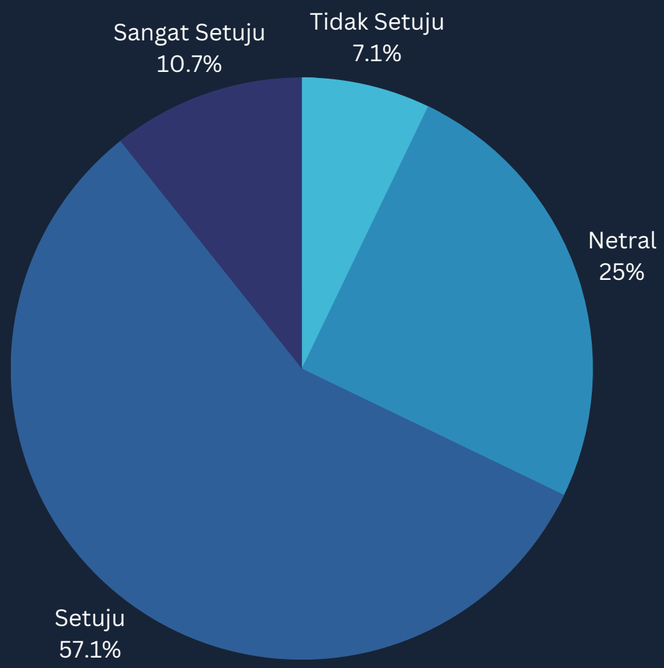
On the other hand, most users agreed that new search bar suggestion feature can improve their experience in finding the answer

How to install

How to install python

How to install nodejs

Anda cenderung memilih saran yang muncul pada search bar?



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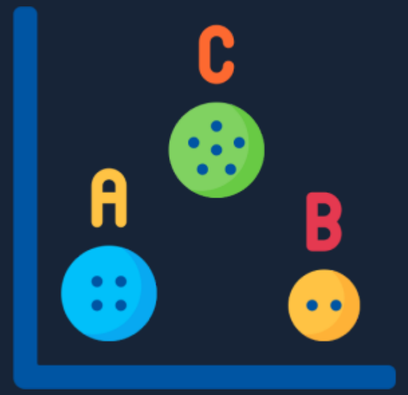
So, we decided to develop some features that can help users find their answer, there are:

New ChatBot
with Artificial Intelligence

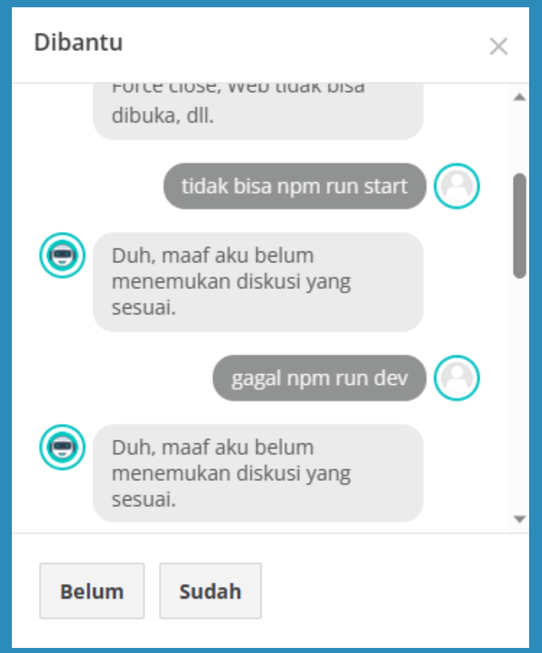
New Search Bar
with Word Suggestions



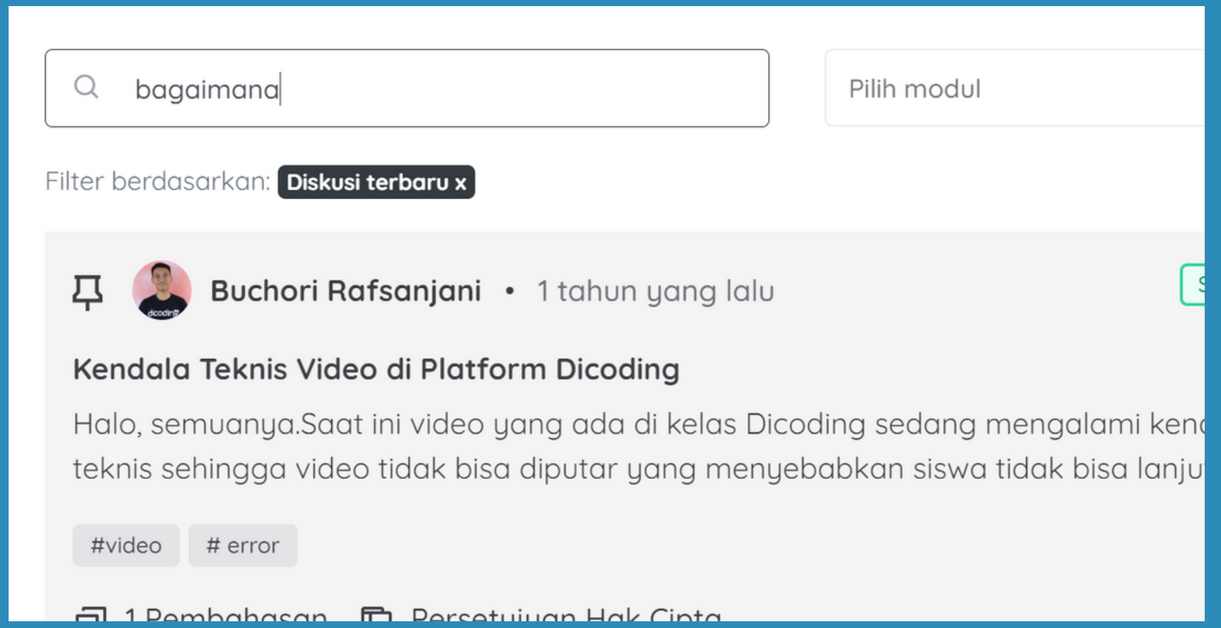
Discussions Related
with Cosine Similarity

Existing result

Dibantu



Forum Diskusi Search Bar



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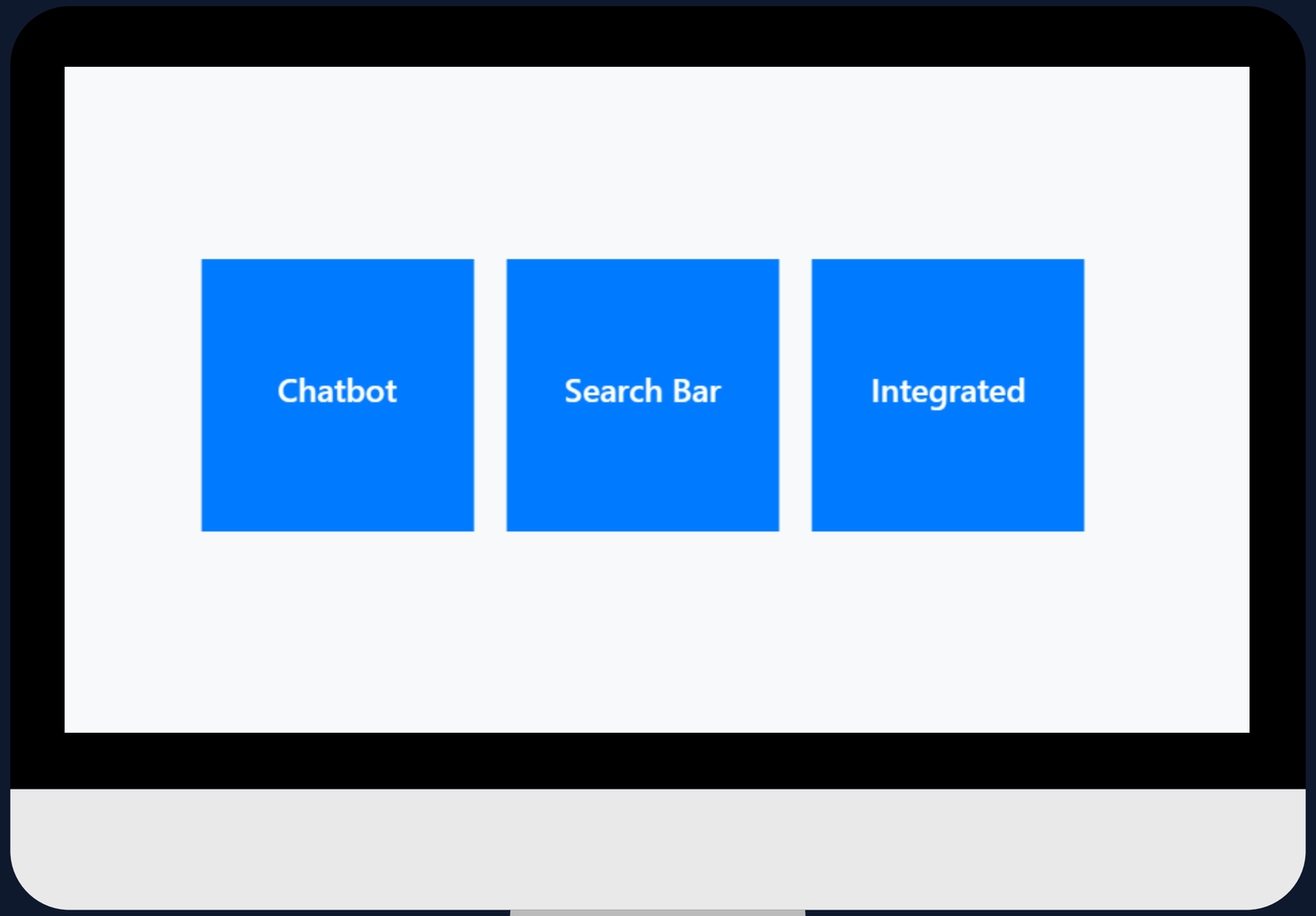
We present to you, DiskusAI

if you dont know why, ask AI



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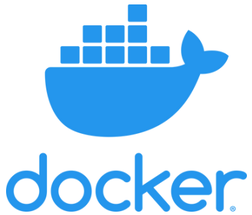
Machine Learning Implementation

Tools



Dataset

Discussion


```
[
  {
    "id": 88980,
    "course_id": 256,
    "module_name": "Kuis Coding : Logika Operator dan If Else",
    "tutorial_id": 15875,
    "discussion_title": "Apakah inklusif atau eksklusif?",
    "question": "<p>Saya mengalami error begini:</p><p>- Logika masih salah ketika score mendapatkan nilai antar
    "solved": "1",
    "tags": "[conditions]"
  },
  {
    "id": 88990,
    "course_id": 256,
    "module_name": "Tipe Data",
    "tutorial_id": 13877,
    "discussion_title": "Perbedaan nilai pada Fungsi BigInt",
    "question": "<p>Halo. kenapa hasil pembuatan tipe data BigInt pakai fungsi BigInt kalau parameter masukannya
    "solved": "1",
    "tags": "[data-type]"
  },
```


Used Features:

- id
- course_id
- module_name
- discussion_title
- question

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Tokenizing

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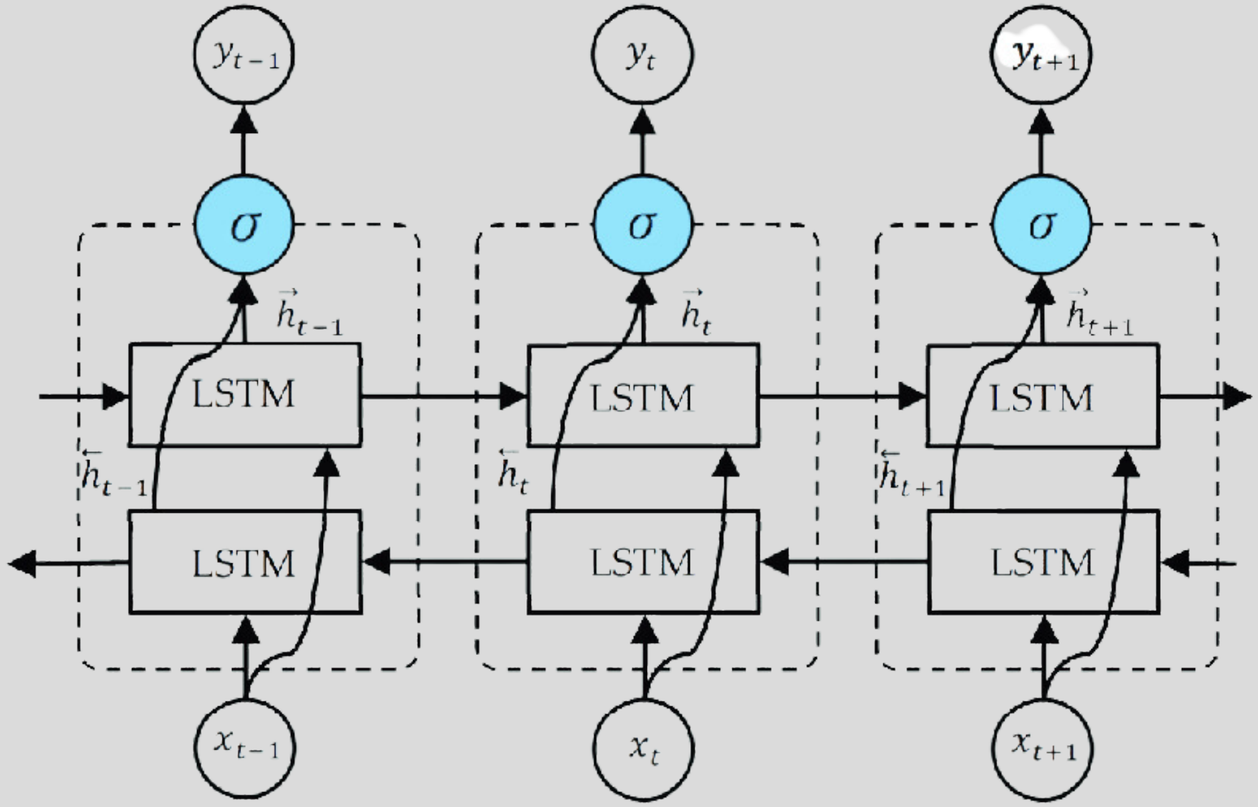
Embedding

bisakah menggunakan query untuk submission →	0.247	-0.932	-0.892	0.235
mau nanya cara membuat tabel →	-0.593	0.891	0.835	0.034
bagaimana cara menghasilkan output yang →	-0.249	-0.847	-0.304	0.385
izin bertanya apakah hanya dengan →	-0.172	-0.463	0.980	-0.885



The Unfolded Architecture of Bidirectional LSTM (BiLSTM)

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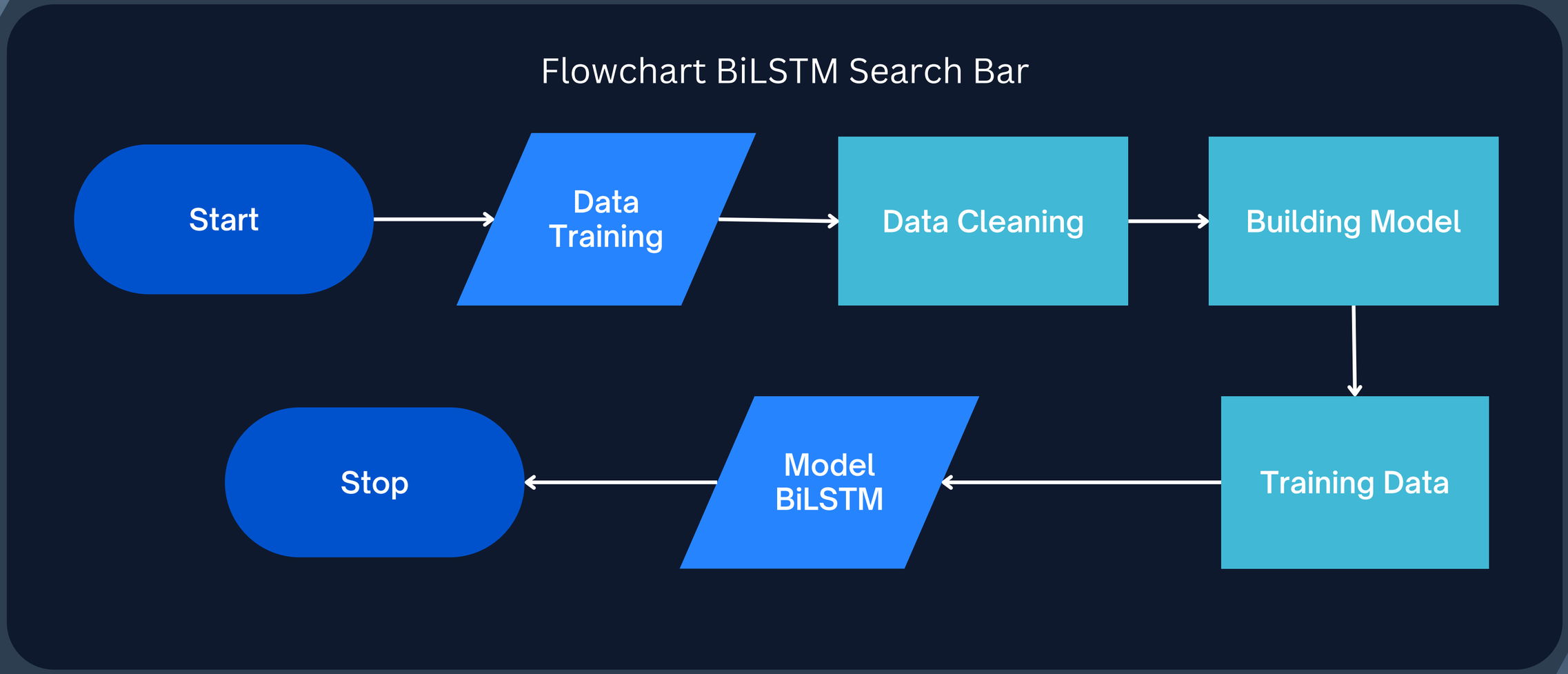

Cosine Similarity

$$\cos(\theta) = \frac{A \cdot B}{\|A\|\|B\|} = \frac{\sum_{i=1}^{n} A_i B_i}{\sqrt{\sum_{i=1}^{n} A_i^2}\sqrt{\sum_{i=1}^{n} B_i^2}}$$

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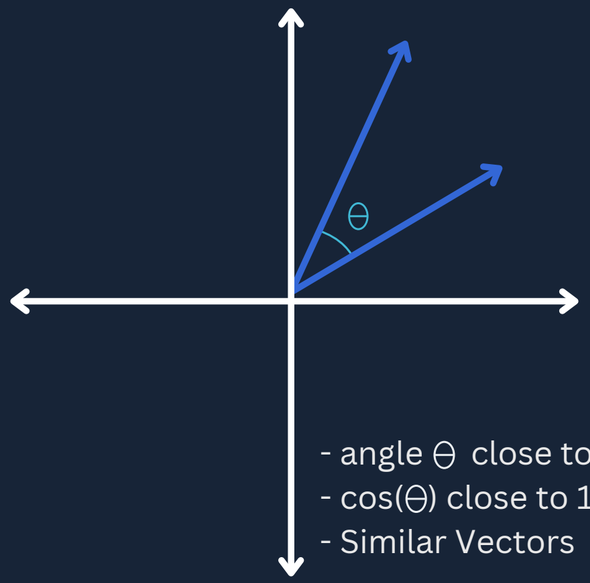
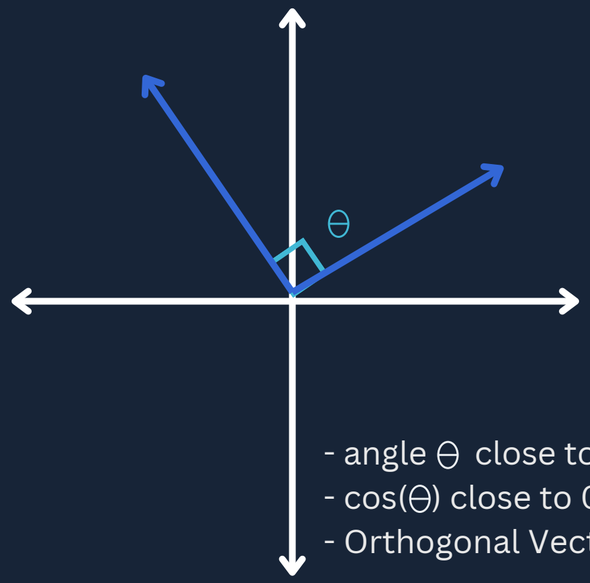
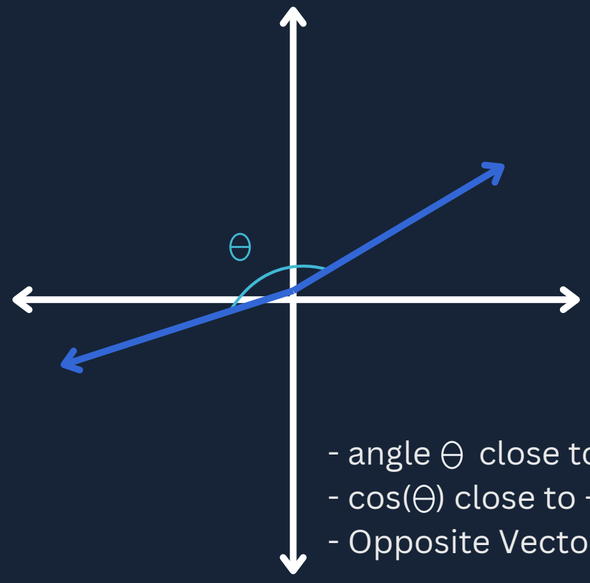


- angle Θ close to 0
- cos(Θ) close to 1
- Similar Vectors



- angle Θ close to 90
- cos(Θ) close to 0
- Orthogonal Vectors



- angle Θ close to 190
- cos(Θ) close to -1
- Opposite Vectors

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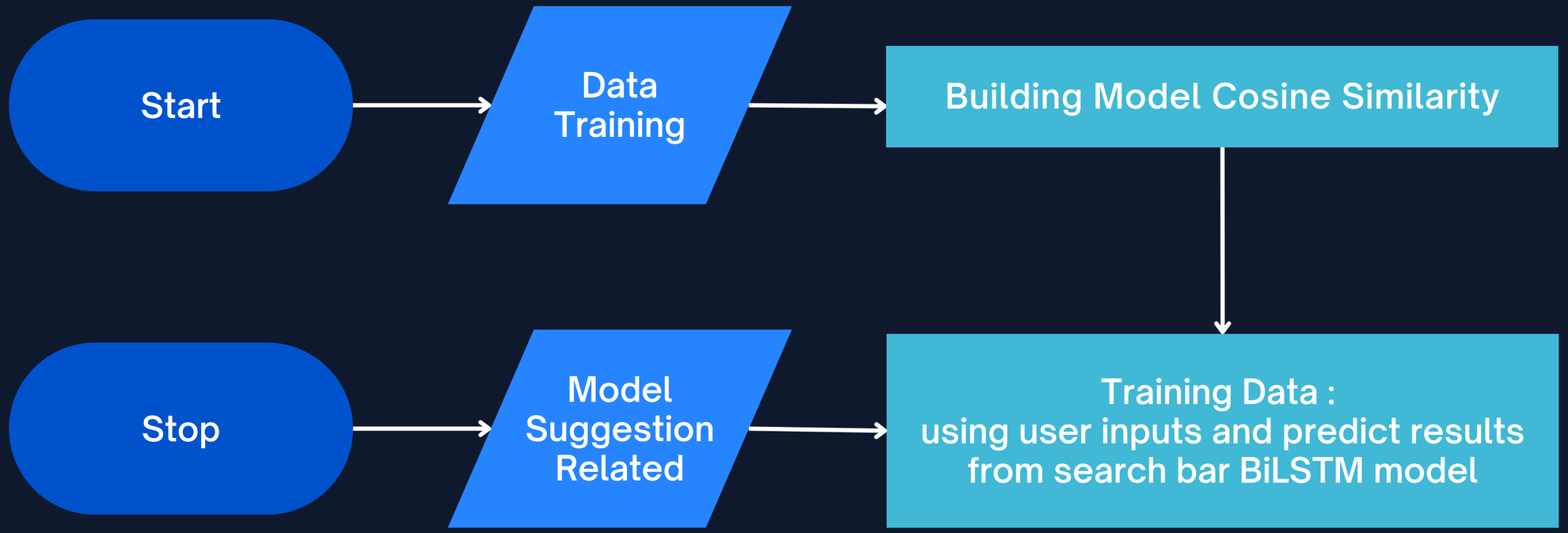
Flowchart Suggestion Related Model Search Bar



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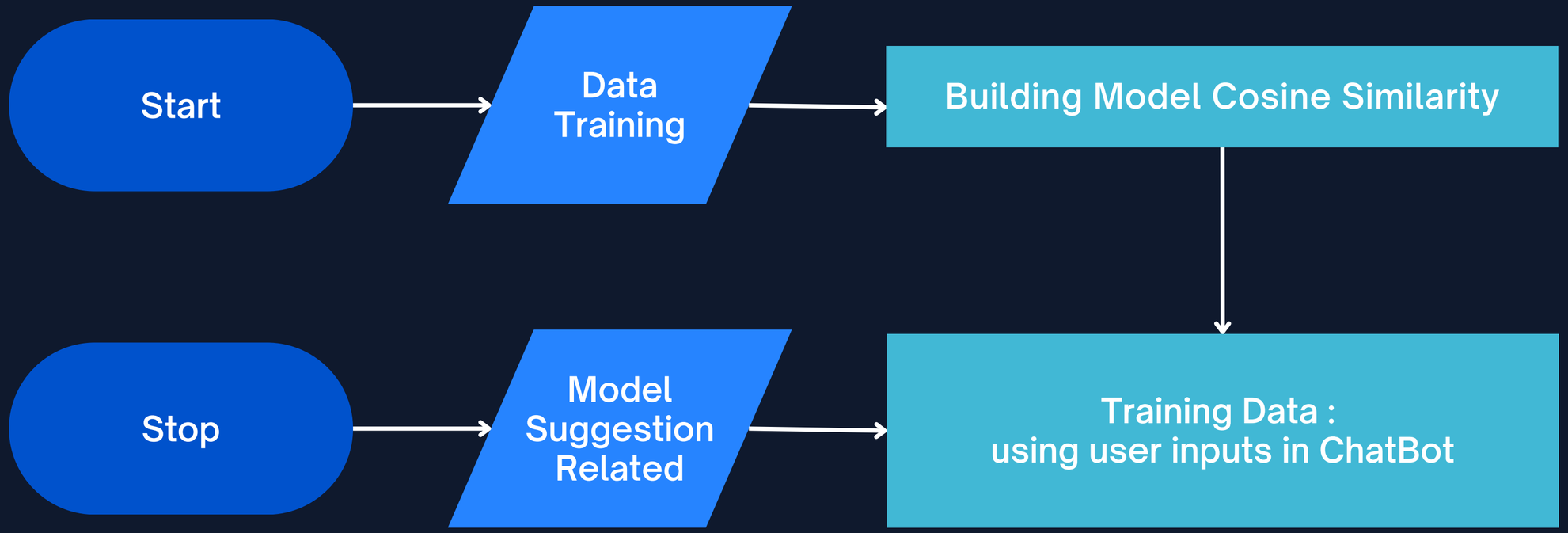
Flowchart Suggestion Related Model ChatBot



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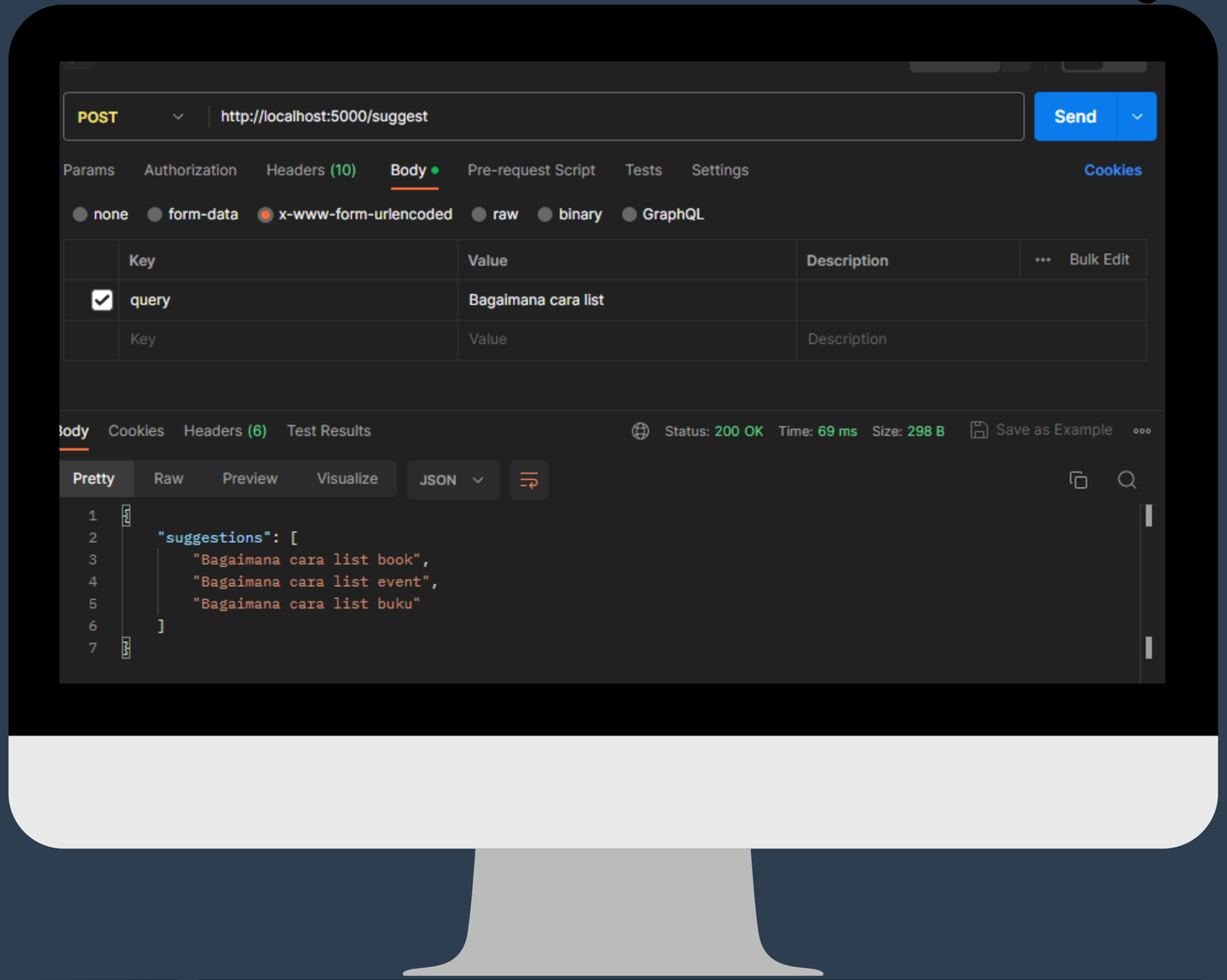
Machine Learning

Result



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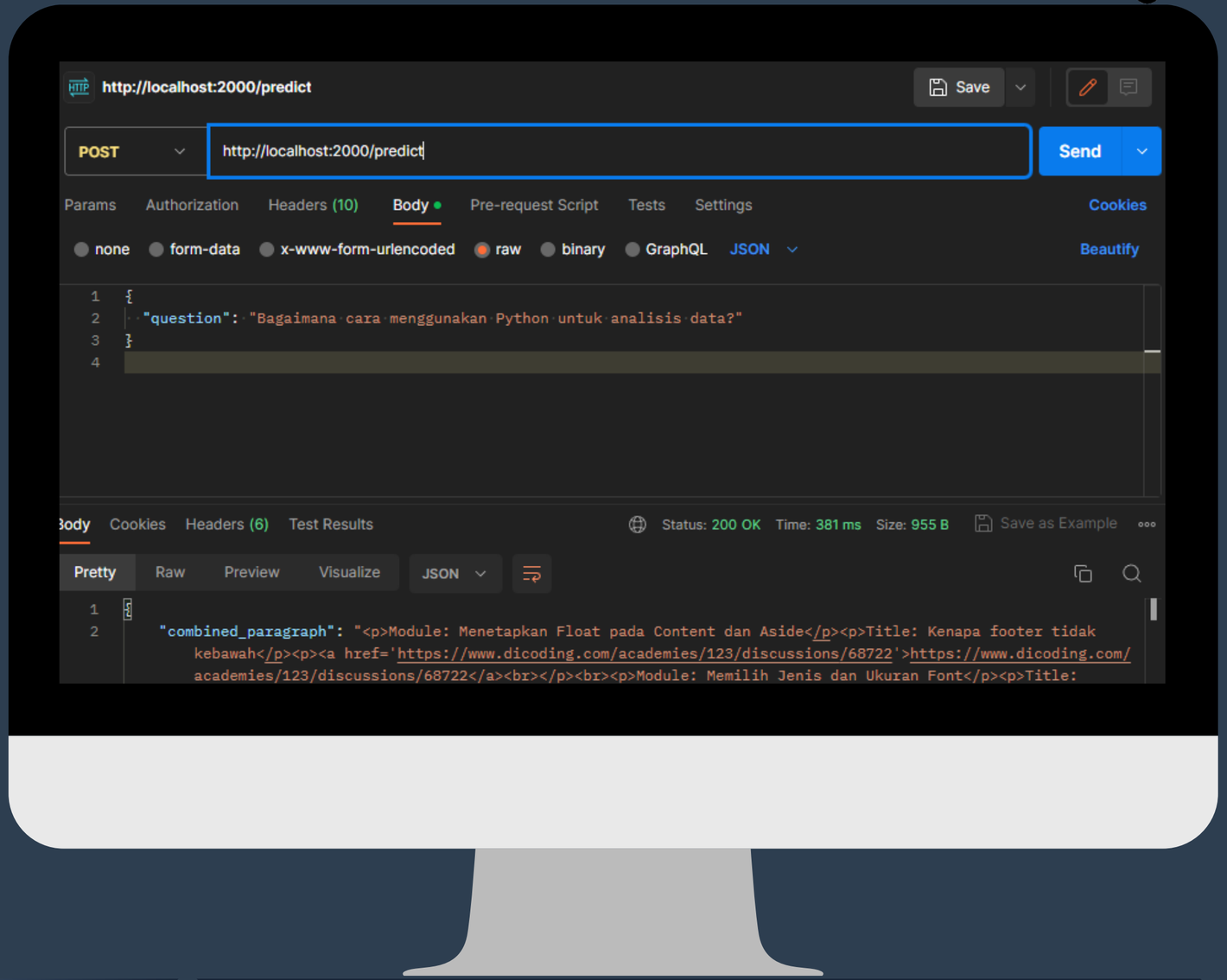
Machine Learning

Result



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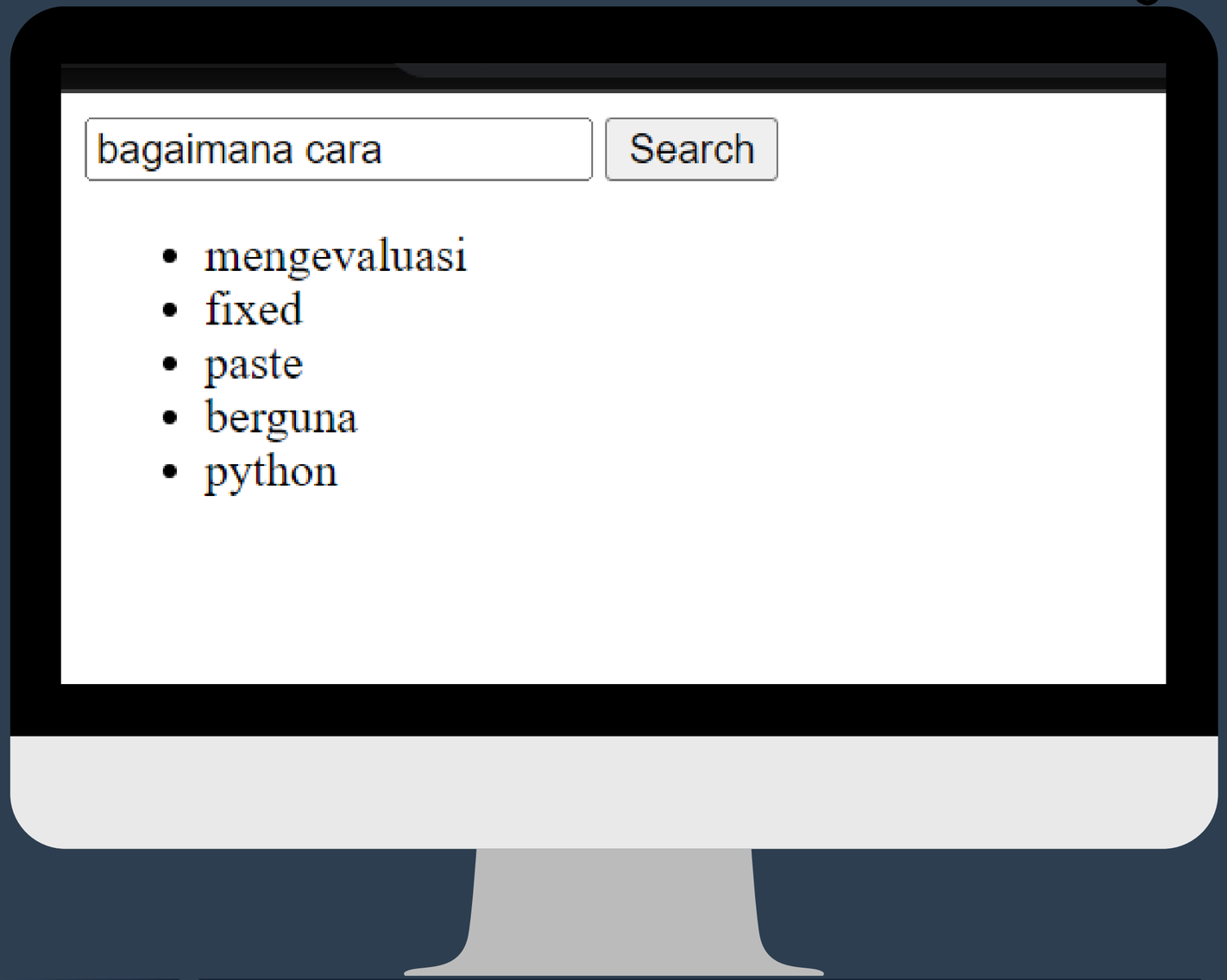
Machine Learning

Result



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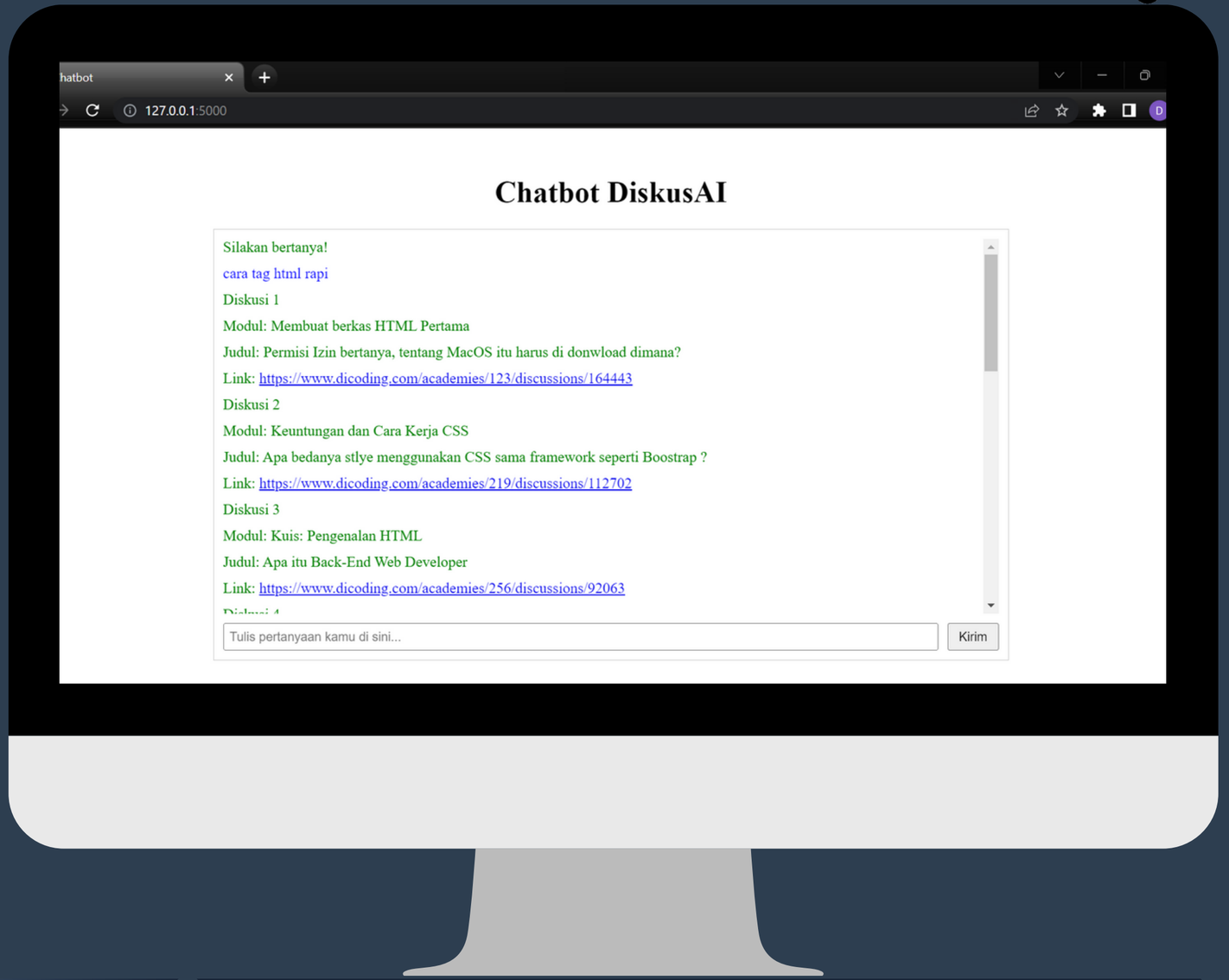
Machine Learning

Result



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Cloud Computing Implementation

Tools

Flask

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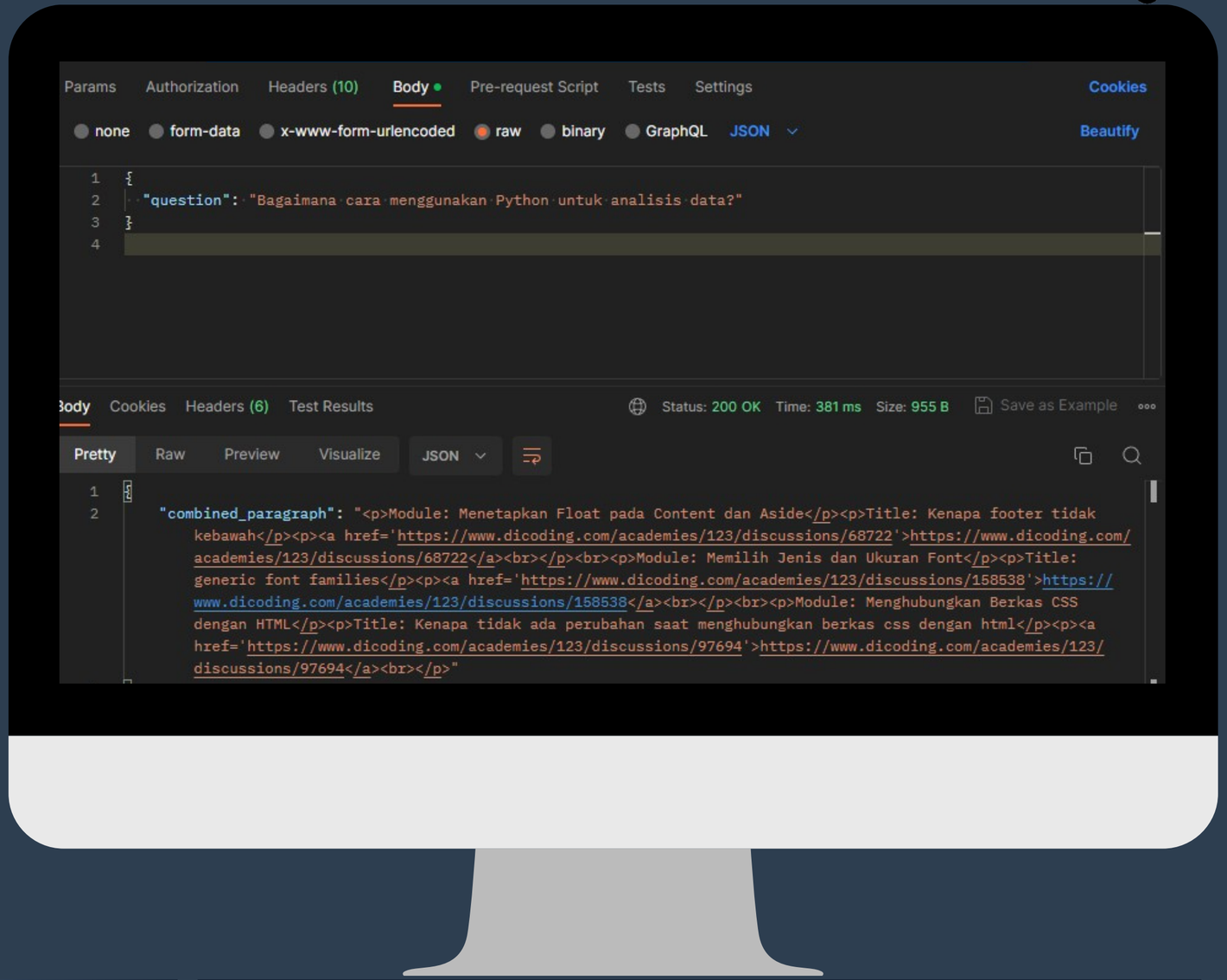
API Documentation

ChatBot



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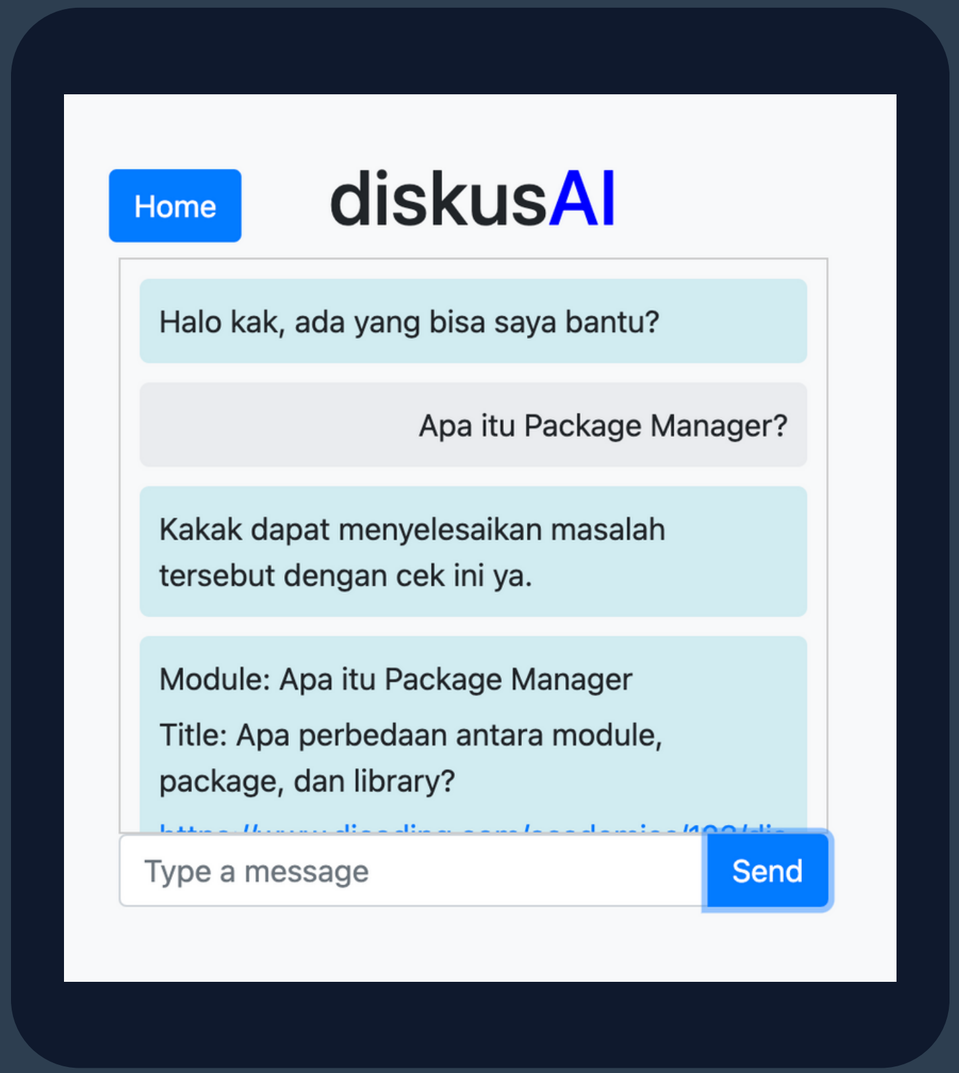
API Documentation

ChatBot



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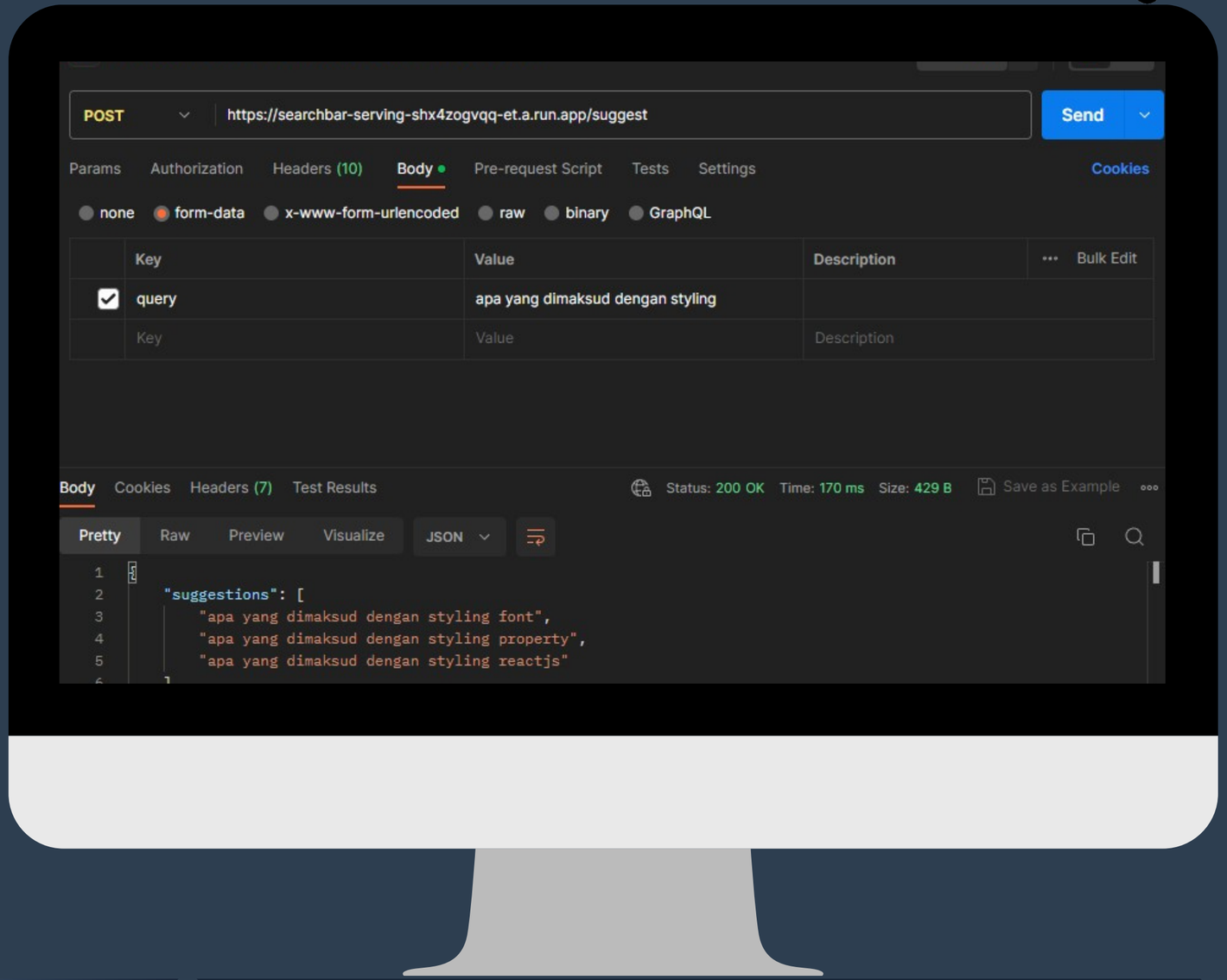
API Documentation

Search Bar



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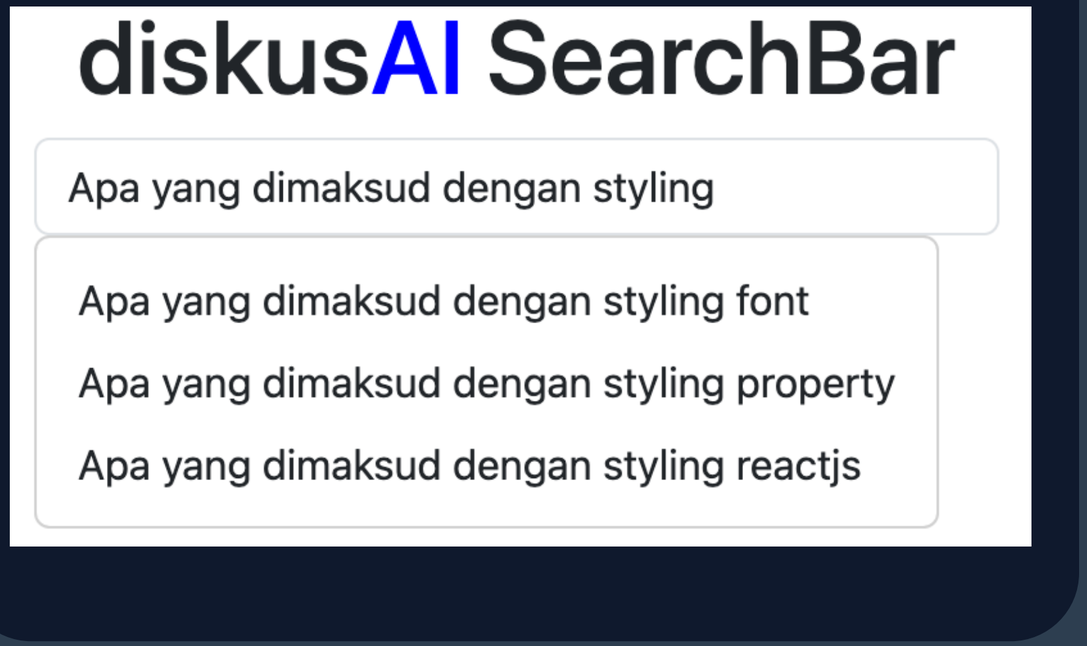
API Documentation

Search Bar



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Overview of Google Cloud Platform Management

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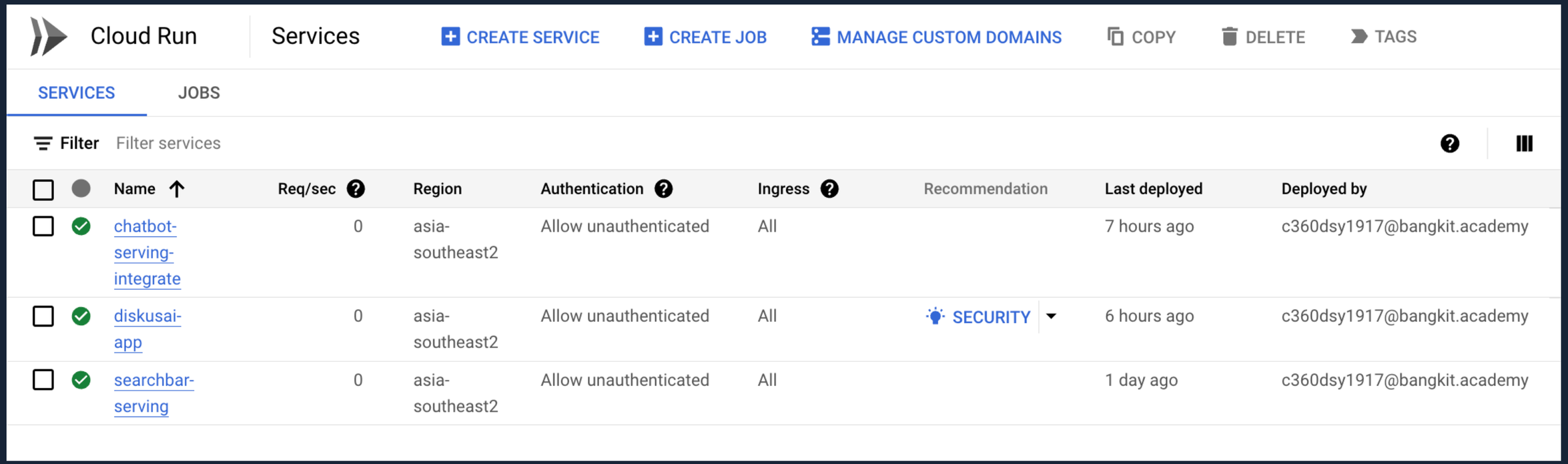
Deployed App in Cloud Run



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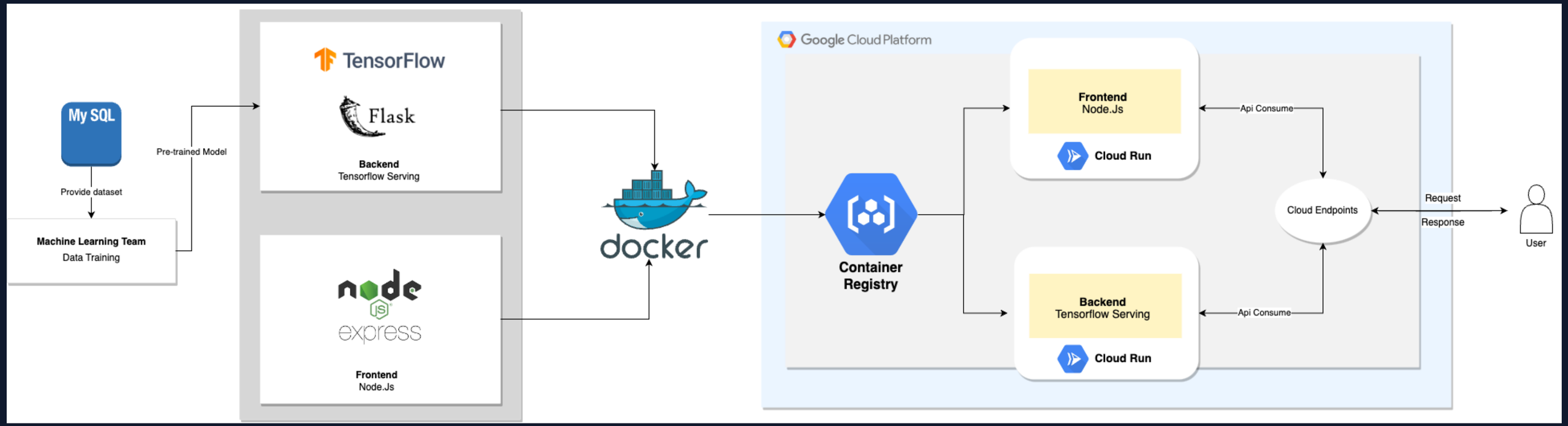
Cloud Computing Workflow



DiskusAI Demo

https://rb.gy/l9cqd

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Thanks for your attention!

"Stay hungry, Stay foolish"

Steve Jobs