

PRiSM

A Chrome Extension for AI-based
Sentiment Analysis of Users' Feedback

PRODUCT REVIEW VIA INTELLIGENT
SENTIMENT MINING

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Problem

Consumers and businesses struggle to efficiently derive useful insights from an overwhelming number of reviews.

Challenges

- Sheer volume of reviews makes manual analysis impractical.
- Reviewers' emotions and sentiments are often hidden in nuanced language.

Abstract Solution

A tool that:

- Aggregates dominant emotions and themes from extensive review pools.
- Employs intelligent algorithms to distill reviewer sentiments into actionable insights.

Proposed Solution PRiSM

- Classifies reviews based on dominant themes and sentiments.
- Highlights critical product features.
- Provides summarized insights tailored for:
Consumers: To enhance buying decisions.
Businesses: To refine operations and innovate effectively.

PROBLEM STATEMENT

DATA SOURCES & WORKFLOW



Manually collected reviews from platforms

- **g2.com**
- **Kaggle**
- **e-commerce websites**



Performed sentiment analysis on the collected reviews using advanced AI tools

- **ChatGPT**
- **Claude.ai**
- **Poe.ai**

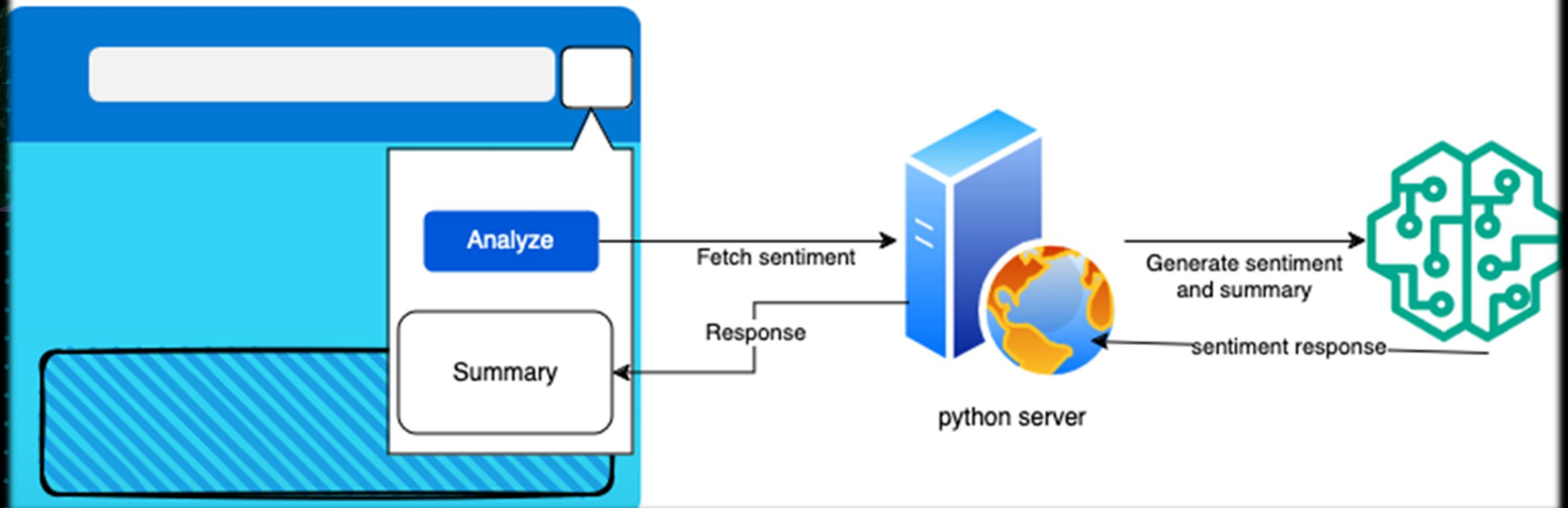


Developed the Chrome extension 'Comment Scraper'

- **Scraping reviews directly from Amazon.in.**
- **Generating a sentiment summary for actionable insights.**

THROUGH THE LENS: PRISM WORKFLOW

Flow diagram



AI METHODOLOGIES USED

Large Language Model (LLM) Utilized:

- OpenAI's GPT-4o-mini Large Language Model (LLM) with API integration.

Prompt Engineering:

- Chat.Completions.Create : Setting the tone/behaviour of LLM Model
- Key Parameters fine tuned

Key Parameters:

Temperature:

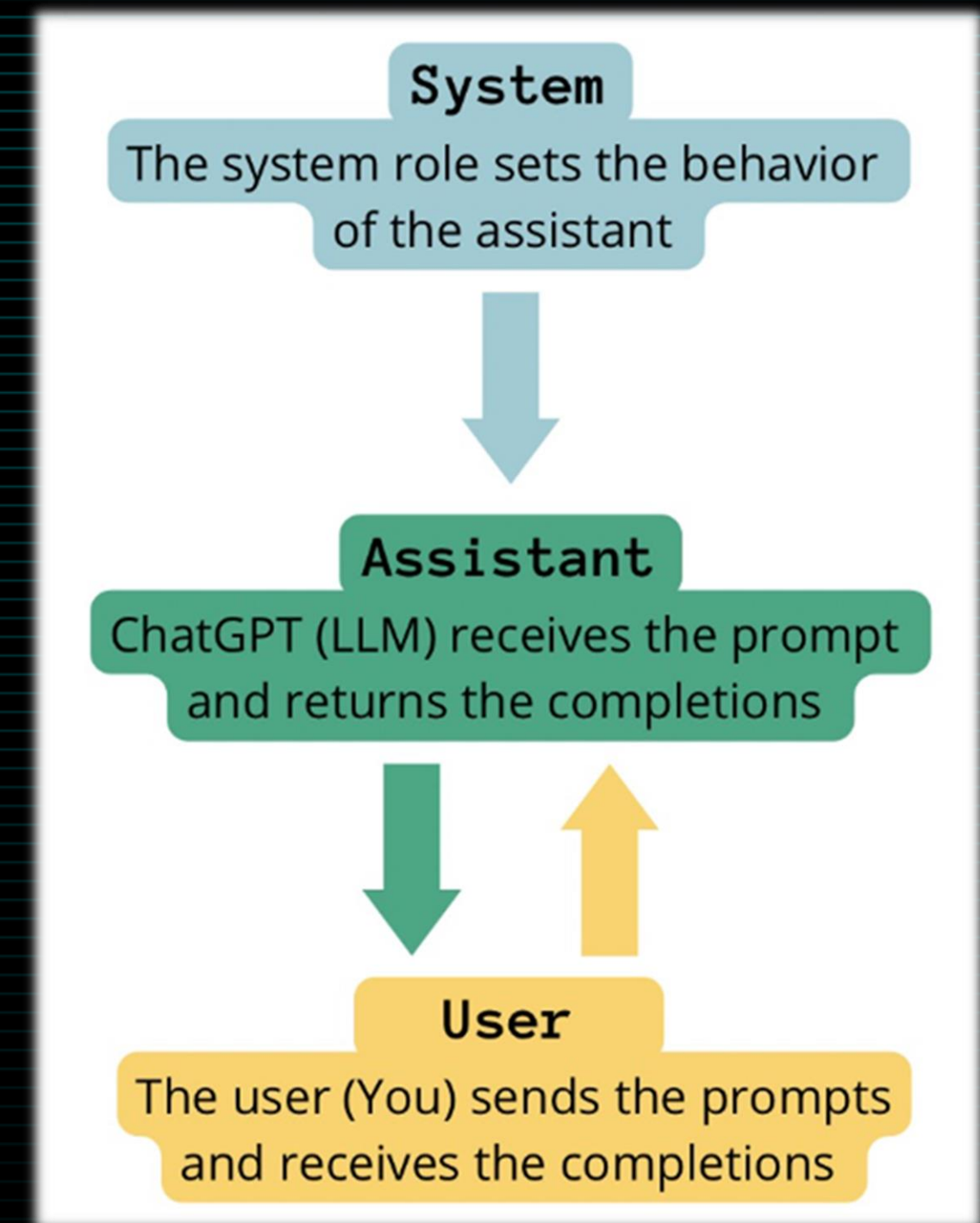
- Controls the randomness of the model's output.
- For this project: $T = 0$ (ensures precise and deterministic results).
- Higher values of T were avoided as they produced less accurate summaries.

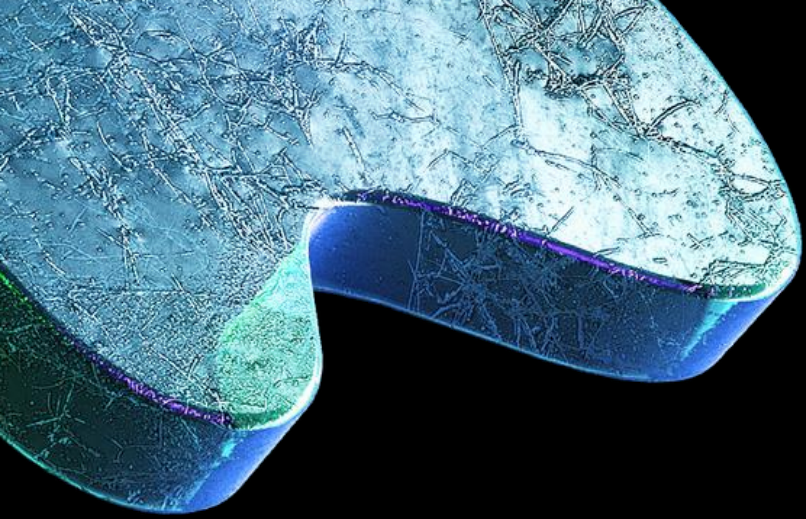
Max Tokens:

Determines the length of the output and manages API costs.

Value set to **800**:

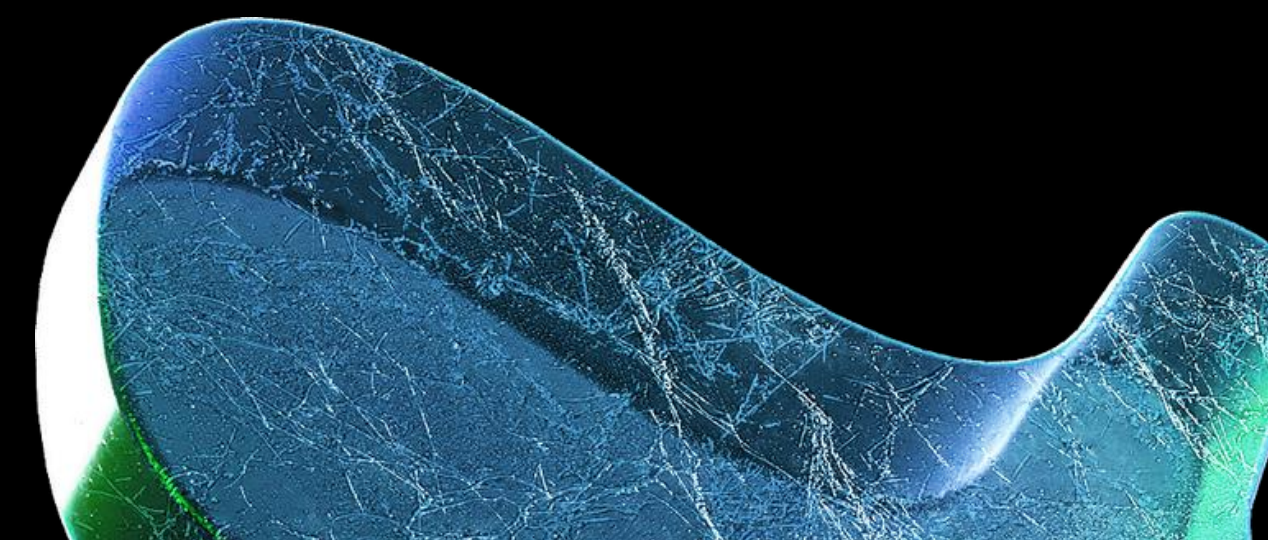
- Provides a detailed summary of key product features.
- Ensures customers get actionable insights for informed buying decisions while keeping costs manageable.





PRISM IN ACTION!!!

Live DEMO



DOCKER

As part of every
code push, the
docker image gets
created to execute
on any machine.

CONTRIBUTION

Sr. No.	Topic	Member 1	Member 2	Member 3	Member 4	Member 5	Member 6	Member 7	Sum
		Abhishek Dutta	Krishna Kumar Perumalla	Navya Andrews	Avyakth	Mihir Makwana	Chandana Koushik	Isht Vibhu	
1	Data Source Analysis and Data Collection	15	15	13	6	18	13	21	100.00
2	AI LLM Model Selection	9	20	9	7	32	9	14	100.00
3	Prompt Engineering	10	14	10	8	36	10	12	100.00
4	Parameter Tuning	10	10	19	8	31	10	10	100.00
5	App Development	30	20	9	7	9	16	9	100.00
6	Overall Flow of the Code	10	25	18	5	21	7	15	100.00
7	Presentation	11	11	11	6	15	21	24	100.00
8	Documentation	13	13	13	8	10	13	29	100.00

SUMMARY

- **Expand Dataset:** Enhance the dataset with a wider variety of reviews for better analysis.
- **Enhance Model Accuracy:** Improve model performance through advanced algorithms and fine-tuning.
- **User Feedback Integration:** Gather feedback to ensure user needs are met and implement refinements.
- **Collaborations:** Partner with organizations to access diverse data and improve reach.

GITHUB REPOSITORY



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THANK YOU