

High Level Design(HLD)

Freeform Text Generation for Content Creators

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Abstract

This project investigates the application of generative AI, specifically the GROQ Gemma-7B model, for automated content creation, with a focus on generating high-quality blog posts. The GROQ Gemma-7B model, known for its advanced natural language processing capabilities, is utilized to create engaging and informative blog content across various topics.

The project involves training the model on a diverse dataset of blog posts, allowing it to learn the nuances of tone, style, and structure typical of successful online content. By leveraging the power of generative AI, we aim to produce blog posts that are not only coherent and well-structured but also tailored to meet the specific needs and preferences of different audiences.

Throughout the project, we assess the model's ability to generate content that resonates with readers, evaluating factors such as readability, engagement, and relevance. The outputs are compared to human-written blogs to measure the effectiveness of the AI-generated content in maintaining quality and appeal.

Our findings indicate that the GROQ Gemma-7B model is capable of producing blog content that closely mirrors human writing, with minimal need for manual editing. This approach to content creation has the potential to streamline the blogging process, reduce time and costs associated with content generation, and maintain consistency across various platforms.

This project contributes to the growing field of AI-driven content creation, demonstrating the viability of using generative AI models like GROQ Gemma-7B in producing high-quality blogs. Future work will focus on further refining the model's outputs and exploring its application across different content types and industries.

This abstract encapsulates the project's aim, methodology, and key findings, highlighting the innovative use of generative AI in the field of content creation.

Chapter 1

Introduction

1,1 Why this High-Level Design Document?

The purpose of this High- Design (HLD) Document is to add the necessary data current project description to represent a suitable model for coding. This document intended to help detect contradictions prior to coding, and can be used as a reference manual for how the modules interact at a high level.

- Describe the use design aspects and define them in detail
- Describe the user interface being implemented
- Describe the hardware and software interfaces
- Describe the performance requirements
- Include design feature and the architecture of the project
- List and describe the non-functional attribute like:

Security

Reliability

Maintainability

Portability

Reusability

Application compatibility

Resource utilization

Serviceability

1.2 Scope

The HLD documentation presents the structure of the system, such as the database architecture architecture , application architecture(layers),application flow (Navigation), and technology architecture .The HLD uses non-technical to mildly-technical terms which should be understandable to the administrators of the system

1.3 Definitions

Term	Description
Gemma-7b	GEMMA-7B MODEL
IDE	Integrated Development Environment
AWS	Amazon Web Services

2 General Description

2.1 Product Perspective

This website will create blog using groq api using gemma-7b model and front end develop using react and from front and keys pass to groq api and it generate blog and send to frontend

2.2 Problem statement

To create AI solution for develop blog content.

2.3 Proposed solution

The solution proposed here is use generative model for text generation and it will generate blog data and pass to front end and from there it map with blog details

2.4 FURTHER IMPROVEMENT

Further improvement can do just by using another paid api for content generation and use stable diffusion model for blogs image creation

2.5 Data Requirements

We need only api keys from groq

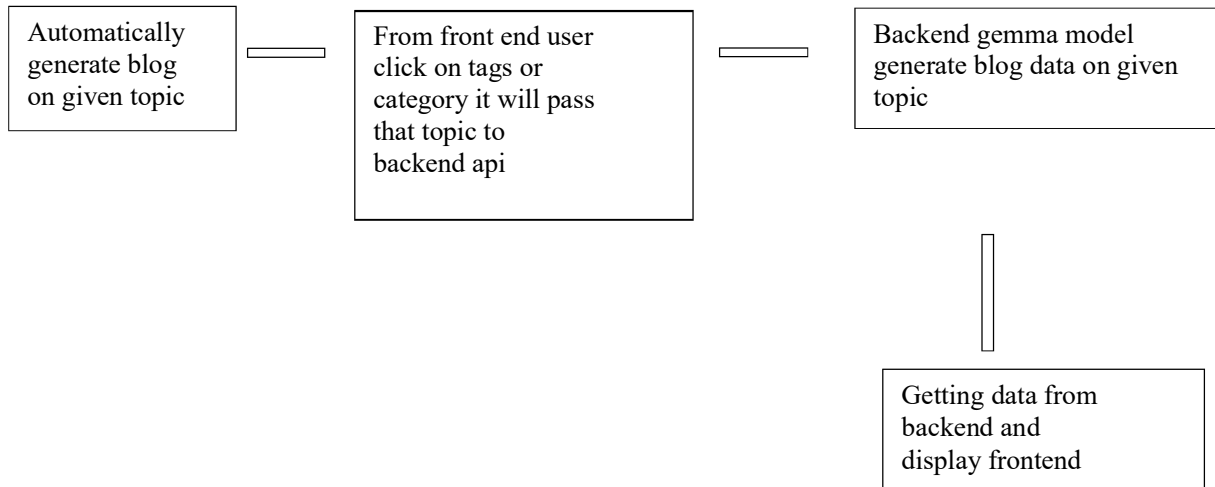
2.6 Tools used

Python programming language and frameworks such as NumPy ,pandas,scikit-learn used to build this model

- Pycharm is used as IDE
- Aws is used for deployment
- Front end developed using react js
- Fast api and python used to crate backend
- Github is used as version control system

3 Design Details

3.1 Process Flow



3.1.1 Click to tags or category

When we click any tag or category value it pass to backend

3.1.2 Data receives backend

When data receive backend and it generate blog data using gemma-7b model

3.1.3 Data pass front end

After data creation it pass blog data to font end and generate blog

3.2 Error Handling

Should errors be encountered an explanation will be displayed as to what went wrong? An error will be defined as anything that falls outside the normal and intended usage.

4 Performance

The model work good for prediction but stock market is not always predictable it can beat any one when big money order will come against you so just use non volatile market and train model with huge volume data and if possible to train on same stock data to predict same stock price

4.1 Reusability

The code written and the components used should have the ability to be reused with no problems

4.2 Application Compatibility

The different components for this project will be using Python as an interface between them. Each component will have its own task to perform and it is the job of the python to ensure proper transfer of information

4.3 Resource Utilization

When any task is performed, it will likely use all the processing power available until that function is finished

4.4 Deployment

For deployment we used amazon web service

5 conclusion

Using gen ai model we can generate blog content and we can use different purpose and its cut more costs and free models are available

6 References

1 groq.com for api credentials

