



MetaRise: AI Powered Chatbot for Digital Marketing

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ABSTRACT

MetaRise is an AI driven software application for web. This specifically designed for the purpose of more accessible to codebase and improvements over there. The major problem, when it comes to accessing codebase as like AI is not an easy, but now we can access by using MetaRise. Here the core ideology was the software needs to fetch the repositories from GitHub and showcases in the app, then there will be a list of repositories will be available, where there we are going to select a repository and give access to our software to access the codebase. The second core ideology was the software has access to AI chatbot for asking doubts and clearing queries. Other supporting features are also added for experiencing like MicroSaaS like product software.

Keywords: AI chatbot, GitHub integration, source code analysis, GroqAI, digital marketing automation, intelligent web optimization, SME support.

1. Introduction

The increasing demand in software application for peak efficiency and productivity, every firm are focusing for building the World's best software product, and that inspires us to built on the line of the product is MetaRise. Here it is a software application which can use for the development of their own codebase by integrate with our software, by then it enables to use the entire codebase from GitHub by special access to the app. After that, the code needs an AI for knowing the techniques and strategies for building the best it could be, for the purpose of solving the inefficiencies on the development of the codebases. This always enables an endpoint for checking the proper grammar of the codebase.

This was our very short introduction for the application of MetaRise, below will have the detailed explanations.

2. Objective

- To make development process easier in terms of Digital Marketing and SEO.
- To check the performance of an SEO when it is in development stage.
- To facilitate the overloaded work on Digital Marketing.
- To visible for developer to view their codebase's actual insights on real time.
- To enrich the coding environment by enabling new emerging technologies.

3. Literature Review

When it comes to Literature Review, a paper called "A study on Performance Improvement of Prompt Engineering for Generative AI with a Large Language Model", there I found an interesting concept where it blows my mind, here it explains how the AI is learning by giving correct prompt and thus eventually how to get results as expected.

Then we go with second paper called "An Effective SEO Techniques and Technologies Guide-map", this clearly explains the core and current technology that associates with SEO strategies and This paper is helped to create the strategies for the software application names MetaRise.

Both the papers would explicitly help out for the complete application development and other resources were also helped out here to test the application performance with the software's features.

4. Existing System

Most current system used in SME marketing depends on effectiveness of the Software Systems used there, where there is analysis report named as “Enhancing SEO in Single-Page Web Applications in Contrast with Multi-Page Applications”, this system is specifically focusing on the single page application over multi page web application by get the right SEO strategies on fast loading application like internet software. Secondly, the most used and preferred system has the advantage for developing system in efficient manner was “Unleashing the Potential of Conversational AI: Amplifying Chat-GPT’s Capabilities and Tackling Technical Hurdles”, this helps in understanding best about the current usage of the AI applications by then we have developed our new idea and system.

As far the papers are saying, that the application is not on the same combination what now was developed, so then the existing system is more likely separate features and then eventually this corresponds the working pattern to make the application possible to develop and deploy.

5. Proposed System

MetaRise introduces a comprehensive and interactive platform that combines backend code analysis with AI-assisted user support. The core features include:

- Safe and Secure Login and Registration method.
- GitHub integrated codebase like repository fetching is possible now.
- Select the repository and initialize the repository.
- AI driven chatbot is available for clearing doubts and asking queries.
- After initialized the repository then Insights will be visible for users.
- Other supporting features like Documentation, ChangeLog, Settings, Subscriptions, Account.

6. Module Description

Authentication Module: This module ensures only the authenticated users can able to access the website of the MetaRise Application.

Integration Module: Integration ensures the list of repositories else fetch by using user’s GitHub account name and entertain in the concerned location component.

Repository Analysis Module: After entering the account name on the Integration Module, then the software analysis will happen by authenticating and entertain new requests.

AI Chatbot Module: This section gives the utmost flexibility to the users who really wants value to their product on the concern of the software.

Admin Monitoring Module: A proper backend module which purely works on backend for storing and retrieving like CRUD operations will be done.

Suggestions and Insights Module: An advanced AI recommendation will enable for users to get to know about their own software about on the internet especially on search engine.

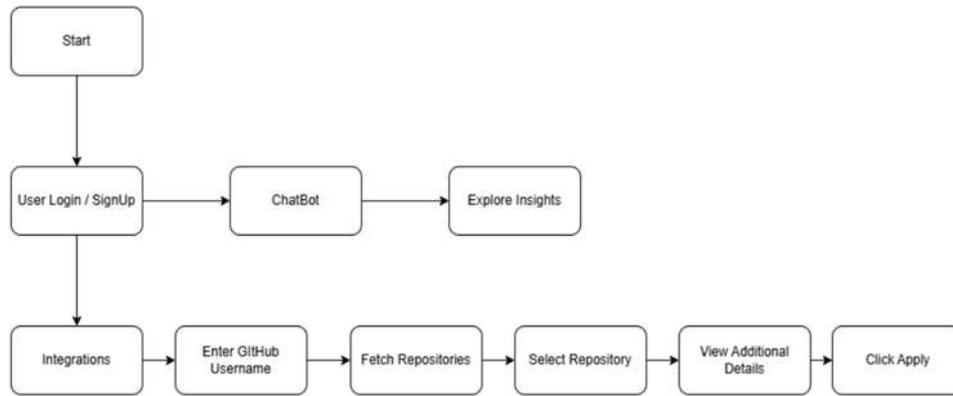
7. Architecture Design

The system architecture design was the master piece of the project because this drives the entire success pattern and for right problem-solution answer for the nature of the product. The architecture was the designed using Frontend, Backend, Database all of combined and more appropriate way of approaching.

For Frontend, for best user experience considerations using ReactJS, NextJS, TailWindCSS.

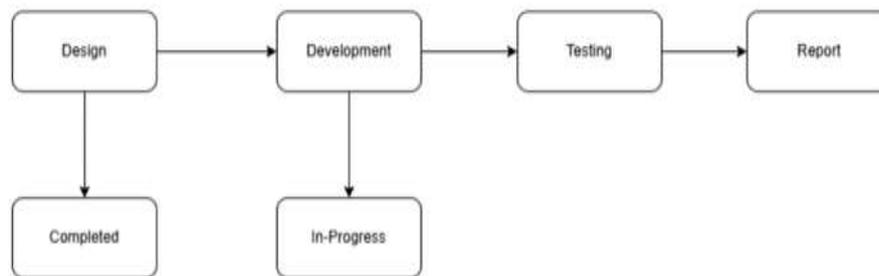
For Backend, for best software communication considerations using NodeJS, FastAPI.

For Database, for best storage retrieval using CRUD operations in MongoDB.



8. Progress Status Flowchart

This section has the quite advantage because it says what are the timings used for this project to complete the work, because this says the scale and development of the project in terms of time taken. Progress status flowchart is very compelling for the project from Desing, Development, Testing, and Report.



9. Summary

MetaRise emerges as the best combination of software which is GitHub Integration + AI ChatBot, on industry this is the only software which focuses on both the technology to give the best for the industry, eventually it ends in productivity. This will defanitley a game changing application which only focuses on the core of the best.

The Industry people need the best of the product, their right choice is MetaRise.

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References

- Park, D., An, G., Kamyod, C., & Kim, C. G. (2024). A Study on Performance Improvement of Prompt Engineering for Generative AI with a Large Language Model. *Journal of Web Engineering*, 22(8), 1187–1206. doi: 10.13052/jwe1540-9589.2285.
- Roumeliotis, K. I., & Tselikas, N. D. (2022). An Effective SEO Techniques and Technologies Guide-map. *Journal of Web Engineering*, 21(5), 1603–1650. doi: 10.13052/jwe1540-9589.21510.
- Kowalczyk, K., & Szandala, T. (2024). Enhancing SEO in Single-Page Web Applications in Contrast with Multi-Page Applications. *IEEE Access*, 12, 11597–11615. doi: 10.1109/ACCESS.2024.3355740.

Anggara, S. M., Hariyanto, A., Suhardi, Arman, A. A., & Kurniawan, N. B. (2024). The Development of Digital Service Transformation Framework for the Public Sector. *IEEE Access*, 12, 146160–146177. doi: 10.1109/ACCESS.2024.3406571.

Hassija, V., Chakrabarti, A., Singh, A., Chamola, V., & Sikdar, B. (2023). Unleashing the Potential of Conversational AI: Amplifying Chat-GPT's Capabilities and Tackling Technical Hurdles. *IEEE Access*, 11, 143657–143675. doi: 10.1109/ACCESS.2023.3339553.