

ARCHIKRAFT AI

Where Architecture finds Essence

Group members

Muhammad Hammad Mustafa (20L-0963)

Muhammad Saad Waseem (20L-2080)

Inzamam Yousaf (20L-1121)

Description

In recent years, there has been significant progress in this context because of the rise and widespread use of artificial creativity. Despite the availability of various general-purpose generative tools, there is always a need for tailored solutions to suit specific goals more effectively. We introduce "ArchiKraft AI" in this context, a ground-breaking AI-based application made to create floor layouts easily. Our platform is tailored to cater to the unique requirements of architects, civil engineers, and home designers, empowering them to significantly boost their efficiency and productivity.

Intention/goals

In pursuit of enhancing efficiency for professionals. Archikraft has set forth the following set of goals and objectives.

- Our primary aim is to develop a web application that translates natural language descriptions into detailed 2D floor plans.
- Utilize NLP and Deep Learning techniques to comprehend natural language descriptions related to floor plans.
- Create a system that can take natural language either in form of text or speech as input and autonomously generate 2D floor plans and output as images.
- Ensure that the system offers an intuitive interface that facilitates architects, civil engineers, home designers and architectural firms.
- Regular evaluation of performance and usability by making optimizations using user feedback.

Functional Requirements

1. User Authentication and Registration:

Users can securely log in or sign up for an account using their credentials or social media accounts.

2. Profile Management:

Users have the capability to modify and update their profiles, including personal information and preferences.

3. Cross-Platform Compatibility:

The application is accessible and functional on both desktop and mobile platforms, ensuring a seamless user experience.

4. Integration with Social Media:

Users can access and interact with your social media profiles directly through the application, promoting engagement and community-building.

5. About Us Page:

The "About Us" section provides users with contact information, developer bios, and relevant photos, offering insights into your team and brand.

6. Secure Data Handling:

The application securely stores sensitive user information and passwords, following industry best practices for data protection.

7. Session Management:

Users can maintain their sessions, ensuring a smooth and uninterrupted experience while using the application.

8. Admin Dashboard:

Administrators have access to a dashboard that displays user analytics and relevant data to monitor application usage.

9. News and Offers Notifications:

Users receive notifications about the latest news and special offers, enhancing user engagement and retention.

10. Subscription Management:

Users can purchase and cancel subscriptions within the application, providing flexibility and control over their memberships.

11. Dynamic Chat Loading with Pagination:

The application employs pagination to load chat content dynamically, optimizing performance and user experience.

12. Search Functionality in Chat:

Users can utilize a search bar within the chat interface to find specific messages or content within conversations.

13. AI-Powered Chatbot for Architectural Plans:

Users can interact with a chatbot that leverages a well-known Language Model (TBD) to generate 2D architectural plans and provide architectural assistance.

14. Downloadable Architectural Plans:

Users can download the generated architectural plans in PDF format for their reference and use.

15. Integration with External APIs:

The application integrates with an external API from a well-known Language Model (TBD), enhancing its capabilities and offering advanced features.