



DESIGN INFINI

Floor planning gen ai

BY
Mounigha BL
Swetha VS
Divya Lakshmi M
Anand Ram J

BTech-Artificial Intelligence
and Data Science
DSNA CET

Business scenario

- The company has a lot of factors to consider when creating the floor plan. They need to account for the different departments that will be housed in the office, the number of employees, the need for collaboration spaces. They also need to make sure that the floor plan meets the company's branding and culture. This tool helps to improve employee productivity, satisfaction and time-saving.

Problem statement

The economy has been developing rapidly along with the population and its needs . People expect more innovative and unique ideas that are feasible and able to suite their taste. Floor planning methods are often time-consuming and error-prone. It is complex and requires deep understanding of the needs and constraints of physical space.

Idea

- The input is entered as a prompt and the bot provides two different floor plans.
- If the architect is not satisfied, they can regenerate in response to get different floor plans for the same prompt.
- The provided floor plans can be customized by adjusting the prompt.
- Floor plan can also be made in accordance with the type of building (i.e house, villa, apartment, company, etc..) and to meet the needs of a specified building.
- It considers specific project requirements, such as capacity, equipment, and desired layout.
- Provides users with information about materials, costs, and regulatory compliance, helping them to make informed decisions about their designs.
- It helps to streamline the design workflow by providing a centralized platform for architects and designers to collaborate on projects.

Why applying Gen AI appealing for the opportunity?

- Provides innovative and unique solutions.
- Reduced errors.
- Improved layout.
- Creating aesthetically pleasing layouts.

Market Potential

- The market for floor planning generative AI is expected to grow significantly in the coming years.
- Due to the increasing demand for innovative and efficient floor plans, as well as the growing adoption of AI technology in the architecture industry.
- According to a report by Precedence Research, the global floor planning generative AI market is expected to reach a value of USD 7,754.83 million by 2032. This represents a CAGR of 34.11% from 2023 to 2032.
- Minimum of USD 20 and can be grown with accordance with its efficiency.

Overall benefits

- Increased efficiency
- Faster turnaround time
- Increased accuracy
- Sustainability
- Customization
- Reduced error