

FUNNEL BUILDER FOR CONTENT MANAGEMENT SYSTEM**M Kirubadevi**

Assistant Professor, Department of Information Technology, Sri Shakthi Institute of Engineering and Technology, Coimbatore.

Mageswaran G, Dharanidharan M, Dharshan K

Students, Department of Information Technology, Sri Shakthi Institute of Engineering and Technology, Coimbatore.

ABSTRACT

This project introduces a transformative No-Code Application Development Platform designed to redefine the traditional software development lifecycle. By eliminating the need for conventional programming, the platform opens the doors of application creation to a wider audience—including entrepreneurs, educators, small business owners, and professionals without any formal technical training. At its core, the platform is engineered to support user-friendly, visual development. Through an intuitive drag-and-drop interface, users can effortlessly assemble application components—such as forms, data fields, buttons, and workflows—without writing a single line of code. A wide range of pre-built templates, modules, and widgets are available, enabling users to quickly scaffold and customize applications to suit their specific needs and use cases. This approach drastically reduces both the development time and learning curve, allowing users to focus on logic and functionality rather than programming syntax. Whether building internal tools, client portals, or automation systems, users are empowered to take full control of the development process. One of the primary goals of this platform is to foster digital inclusion by making software development accessible to all, regardless of technical expertise

INTRODUCTION

Our Funnel Builder for Content Management System project focuses on designing and automating multi-step conversion pathways directly within a CMS. It enables content teams to visually map out user journeys, segment audiences, and deploy personalized experiences without leaving their authoring environment.

OBJECTIVES

The objective of this project is to enhance digital content engagement and conversion by developing a Funnel Builder integrated within a Content Management System (CMS). The system enables users to design personalized content journeys—such as lead generation funnels or onboarding sequences—using a visual, drag-and-drop interface.

It incorporates techniques like behavioural segmentation and conversion flow analysis to recommend optimal funnel structures based on historical user interactions. Evaluation of the system's performance is conducted using metrics such as conversion rate improvement, funnel completion rate, and user drop-off analytics, ensuring that the funnel recommendations and designs are both effective and data-driven.

CLAIMS**Claim 1:**

A low-code application development system, comprising a visual interface builder configured to enable users to design application layouts and workflows using drag-and-drop components

Claim 2:

A metadata management module that stores and interprets application structure, behaviour, and logic in a non-programmatic format, and a runtime engine configured to dynamically render userdefined applications based on said metadata without requiring traditional source code compilation.

Claim 3:

Further comprising a rule-based automation engine that allows users to define logical conditions and triggers using a declarative visual interface, wherein said engine translates userdefined rules into executable logic during runtime.

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Claim 4:

Wherein the platform includes a visual-to-code translation module configured to convert user-defined workflows and data models into backend service code using a template-based generation approach.

Claim 5:

Further comprising a reusable component library, wherein the system uses a component suggestion engine to recommend user-defined modules or templates based on contextual relevance and historical usage patterns.

Claim 6:

Wherein the platform includes a security rule inference engine configured to automatically apply role-based access control policies to application modules, based on user roles and predefined permissions stored in the system database.

DETAILED DESCRIPTION OF INVENTION:

INTRODUCTION:

Funnel builders integrated into content management systems (CMS) act as strategic tools for guiding users through structured conversion journeys. These tools enable content creators to design customized flows—such as newsletter signups, onboarding sequences, or sales pipelines—tailored to user behavior. By tracking user interactions across each funnel stage, the system continuously refines the journey, offering a more intuitive and engaging experience. It's like having a digital guide that personalizes each user's path to ensure they find what they need efficiently.

CONTINUOUS IMPROVEMENT CYCLE:

The invention introduces a dynamic, continuous improvement loop where every user interaction within the funnel contributes valuable insights. These insights help optimize content placement, user navigation, and CTA (Call-to-Action) effectiveness. The system analyzes which steps cause user drop-offs or conversions and uses this data to suggest adjustments. This creates a feedback cycle where user behavior informs funnel enhancements, directly improving engagement and conversion rates.

CONVERSION BOOST THROUGH PERSONALIZATION:

The Funnel Builder leverages user data to dynamically personalize funnel steps for different audience segments. For example, a user downloading a whitepaper may be guided through a funnel that ends in a personalized demo request page, while another user may be shown a pricing breakdown. By tailoring the funnel to each user's interests and intent, the system significantly increases engagement and drives more conversions from otherwise passive content interactions.

FUNNEL DESIGN TECHNIQUES:

The recommendation engine within the funnel builder uses two primary techniques to optimize content flow:

1. **Content-Based Flow Optimization:**
This method analyzes the structure and effectiveness of existing funnel steps. Funnels with high conversion rates are clustered, and when a new funnel is built with similar components, the system suggests proven step sequences to improve success rates.
2. **Behavior-Based Funnel Recommendation (Collaborative Filtering):**
By studying user behaviors across various funnels, this technique groups users with similar navigation patterns. Funnels that performed well for one group are then recommended for other users within the same behavioral cluster, maximizing the chance of achieving desired outcomes.

CONCLUSION

The project aims to optimize user journeys within a Content Management System by implementing a Funnel Builder that recommends high-performing conversion paths. Leveraging behavioural analytics, clustering techniques, and collaborative filtering, the system suggests optimal funnel steps based on patterns from similar users and successful funnels.

By analysing user interactions and drop-off points across different funnels, the system provides intelligent recommendations for structuring new conversion flows—helping content managers guide users more effectively from entry to goal completion.

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Future improvements include enhancing system responsiveness, scaling for large enterprise CMS use, and accommodating new users with minimal interaction history. To address current limitations, we plan to integrate deep learning techniques, such as recurrent neural networks (RNNs), to factor in time-sequenced behaviors and improve dynamic content suggestions. Additionally, a real-time feedback mechanism will be incorporated, allowing the system to adapt funnels based on user responses and continuously personalize experiences for better engagement and higher conversion rates.

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