VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Jnana Sangama, Belagavi, Karnataka - 590018

A Project Report on

“PRESENTATION HUB”

Submitted in partial fulfilment of the requirements for the conferment of degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

by

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Yelahanka, Bengaluru, Karnataka - 560064

2025–2026

BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT

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CERTIFICATE

This is to certify that the project entitled **“PRESENTATION HUB”** is a bona fide work carried out by **Himanshu Lodha (1BY22CS083)**, **K Amrutha Kamath (1BY22CS095)**, and **Aditya Raj (1BY22CS210)** in partial fulfilment for the award of “BACHELOR OF ENGINEERING” in “Computer Science and Engineering” of the Visvesvaraya Technological University, Belagavi, during the year 2025–2026. It is certified that all corrections and suggestions indicated for internal assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect to work for the BE degree.

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ACKNOWLEDGEMENT

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DECLARATION

We hereby declare that the project titled **“PRESENTATION HUB”** is a record of original project work under the guidance of **Dr. Sanjay H A** (Professor & Principal, serving as Project Guide), BMS Institute of Technology & Management, Autonomous Institute under Visvesvaraya Technological University, Belagavi, during the Academic Year 2025–2026.

We also declare that this project report has not been submitted for the award of any degree, diploma, associateship, fellowship or other title anywhere else.

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ABSTRACT

This project presents Presentation Hub, an AI-powered platform designed to automate the creation of professional presentations from simple text prompts. The system leverages the OpenAI API to generate structured slide content, titles, summaries, and visual suggestions within seconds. Built with modern web technologies including Next.js and React, it provides a responsive and interactive user interface. The platform integrates Clerk for secure user authentication and Lemon Squeezy for subscription-based payment processing, while data persistence is handled through Prisma ORM with Neon PostgreSQL database. The frontend employs Zustand for state management and Shadcn UI components for a polished user experience. Testing results demonstrate high reliability and efficiency, with users reporting satisfaction with the quality of generated presentations. The platform successfully demonstrates how generative AI can enhance creativity, reduce workload, and improve productivity in presentation creation across multiple domains including education, business, and professional settings.

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Chapter 1

Introduction

1.1 Background

Creating visually appealing and well-structured presentations has always been a time-consuming task, especially for students, educators, and professionals who need to present information quickly. Traditional presentation tools require users to manually design layouts, add content, choose images, and maintain consistent formatting across slides. As workload increases and deadlines become tighter, people often struggle to prepare high-quality presentations within a limited time. With the rise of AI-driven solutions, there is a growing need for tools that can automate this process and reduce the effort required to convert ideas into professional slides.

Presentation Hub addresses this need by leveraging advanced generative AI to create complete presentations from just a text prompt. Built using modern technologies like Next.js, React, OpenAI API, Clerk authentication, and Lemon Squeezy payments, the platform delivers a seamless and secure user experience. The system intelligently generates slide content, titles, summaries, and visuals, allowing users to produce ready-to-use PPT files within seconds. By integrating AI with a powerful web stack, Presentation Hub simplifies the entire presentation-creation workflow and demonstrates how automation can significantly enhance productivity and creativity.

1.2 Problem Statement

Creating professional presentations remains a time-consuming and skill-intensive task for students, professionals, and educators. Despite the availability of modern presentation tools, there is no fast and automated solution that can convert a simple prompt into a fully generated PPT with structured content, consistent design, and relevant visuals. This gap creates a need for an AI-powered platform that automates the entire slide creation process and significantly reduces the effort required to prepare professional presentations.

1.3 Problem Description

Creating a well-structured and visually appealing presentation requires a combination of content knowledge, design skills, and a significant amount of time. Users often struggle with organizing information into meaningful slides, maintaining consistent formatting, selecting appropriate visuals, and ensuring the presentation flows smoothly. For many students, teachers, and working professionals, these tasks become overwhelming—especially when deadlines are short or when they lack strong design experience. As a result, presentations often end up rushed, inconsistent, or lacking clarity.

Although several presentation tools exist, most of them still rely heavily on manual effort. They do not offer an automated way to transform a simple text prompt into a complete, ready-to-use PowerPoint file. Users must start from scratch, design templates themselves, and manually populate content. This gap creates a strong need for an AI-powered solution that can instantly generate structured slides, relevant text, and visuals. Presentation Hub aims to fill this gap by providing an intelligent system that automates the entire presentation-creation process and significantly reduces the user's workload.

1.4 Objectives

Presentation Hub is an AI-powered platform that automatically generates complete, professional presentations from a simple text prompt. It simplifies the entire slide-creation process by producing structured content, clean layouts, and relevant visuals within seconds. The system combines OpenAI, Next.js, React, Clerk, and Lemon Squeezy to deliver a fast, secure, and seamless presentation-building experience. The objectives of this project include:

1. To automate the creation of presentations using AI, reducing manual effort and saving user time.

2. To generate structured slide content (titles, points, summaries) based on a simple text prompt.

3. To produce professional PPT files with consistent formatting and layout.

4. To integrate OpenAI's API for high-quality content generation and topic understanding.

5. To offer a smooth user experience through a modern Next.js and React-based interface.

6. To provide secure user authentication using Clerk for safe login and access control.

1.5 WPs and SDG Addressed

Solving Complex Engineering Problems Incorporating Sustainability Goals

Mapping of Complex Engineering Problems with Washington Accord WPs (WP1–WP7)

WP Code	**Description**	**Competencies**	**Applicable (✓)**
WP1	In-Depth Engineering Knowledge	Uses standard web development patterns	✓
		Works with relational data structures	
		Applies domain knowledge in AI integration	✓
		Uses industry-standard tools and platforms	✓
		Combines knowledge from multiple CSE fields	✓
		Follows best practices for web applications	
		Refers to research papers or standards	✓
WP2	Wide-Ranging or Conflicting Technical & Non-Technical Issues	Balances security with performance	
		Evaluates resource limitations	
		Considers user experience needs	
		Follows privacy and security rules	✓
		Chooses solutions that scale and are easy to maintain	✓
		Identifies and manages risks	✓
		Considers ethical impacts	✓

WP Code	**Description**	**Competencies**	**Applicable (✓)**
WP3	Abstract Thinking & Originality	Designs new algorithms or models	
		Creates original system designs	✓
		Introduces innovations in machine learning models	
		Uses strong abstract thinking	
		Develops improved optimization methods	
		Experiments with new ways of representing data	✓
		Adds original ideas not taken from standard tutorials	✓
WP4	Design and development of solutions	Solves real-world problems that don't have ready-made code	✓
		Modifies existing tools or frameworks in advanced ways	✓
		Uses cutting-edge or emerging technologies	✓
		Implements algorithms or protocols from scratch	✓
		Handles messy or incomplete data effectively	
		Designs custom workflows for networking, security, or ML	
		Builds non-default configurations in cloud, IoT, or distributed systems	✓
WP5	Use of modern tools	Builds custom security mechanisms	
		Creates new database techniques	
		Proposes original design or coding standards	✓
		Improves standard algorithms	✓
		Defines new performance benchmarks	✓

WP Code	Description	Competencies	Applicable (✓)
		Explains why standard workflows need changes	
		Builds custom testing or validation tools	
WP6	Nature of problem: uncertainty, ambiguity	Collects requirements from different types of users	✓
		Designs role-based access and permissions	
		Manages conflicting requirements	
		Builds interfaces tailored to each stakeholder	
		Uses proper modeling techniques	✓
		Ensures secure data handling for all roles	✓
		Validates the system with user testing	✓
WP7	Interdependence and multidisciplinary factors	Breaks the system into clear layers	✓
		Designs and connects multiple interacting modules	✓
		Integrates hardware and software components	✓
		Handles advanced system constraints	✓
		Uses DevOps tools and automation	
		Tests for performance and reliability	
		Ensures different technologies work together	✓

WP Code	No. of Competencies Mapping	Low/Moderate/High
WP1	4	MODERATE
WP2	4	MODERATE
WP3	3	MODERATE
WP4	5	HIGH
WP5	3	MODERATE
WP6	4	MODERATE
WP7	4	MODERATE

Note: Scale for mapping:	**Complex Engineering Project**
• Low: 1–2 competencies matched • Moderate: 3–4 competencies • High: 5 or more	A project is considered complex if: **Condition A:** At least 2 out of WP1–WP7 are High AND **Condition B:** At least 5 out of WP1–WP7 are Moderate or High This project meets Condition B.

Conclusion: Based on the above key indicators, the project demonstrates moderate to high complexity. The mapping is based on the implemented scope and actual features developed, not theoretical potential.

Note: Competency mapping reflects practical implementation rather than aspirational goals.

1.5.1 Mapping of Project with SDG Goals, Targets, and Indicators

SDG Goal Addressed	**Target Description**	**Justification / Mapping Explanation**	**Expected Impact / Outcome**	**Level**
SDG 9: Industry Innovation and Infrastructure	Enhance scientific research and upgrade technological capabilities of industrial sectors	Promotes automation and innovation through AI-based technology	Encourages industrial efficiency and innovation	High
SDG 4: Quality Education	Ensure inclusive and equitable quality education and promote lifelong learning	Generates structured learning materials and presentations quickly for educational purposes	Improves access to educational content creation tools	High
SDG 8: Decent Work and Economic Growth	Promote sustained, inclusive and sustainable economic growth	Automates manual presentation work, increases productivity for businesses	Enhances workplace efficiency and productivity	Moderate
SDG 12: Responsible Consumption and Production	Ensure sustainable consumption and production patterns	Digital creation reduces paper waste and physical resource consumption	Promotes environmentally conscious digital solutions	High

Chapter 2

Literature Review

2.1 Analysis of the Literature

With the rapid development in AI, NLP, and ML, digital content creation has undergone a significant transformation, especially regarding automated presentation generation. Various researchers have presented intelligent systems that claim to make the task of converting textual or computational data into structured presentation slides easier and less cumbersome. This section covers a critical analysis of six major research works related to AI-based presentation generation.

2.1.1 OutlineSpark (Fengjie Wang, 2024)

This research work, published at ACM CHI 2024, focuses on the generation of presentation slides from computational notebooks such as Jupyter through a well-structured outline approach. It includes the display of an overview of the notebook, an outline panel, and a slide panel. The system integrates NLP and ML through the interface of a JupyterLab plugin that makes slide creation automatic.

Strengths:

- Reduces manual effort to convert notebooks into slides
- Well-organized content extraction
- Improves researcher productivity

Limitations:

- Only accepts notebook-based input
- No advanced visual editing tools
- Lacks collaboration and cloud storage
- Limited UI experience

2.1.2 AI pptX (Vineeth Ravi, 2020)

This arXiv preprint (arXiv:2010.01169) from JPMorgan AI Research introduces a conversational AI-based document generation system in which users issue natural-language commands that are translated into actionable "skills." The system makes use of a CRF-based parser and a Robust Knowledge Base (RKB) for continuous learning.

Strengths:

- Supports voice/text commands
- Continuous learning from user behavior
- Reduces manual command effort

Limitations:

- Back-end driven with no interactive UI
- No drag-and-drop editor
- No project dashboard
- No authentication or payment system

2.1.3 PPTAgent (Hao Zheng, 2025)

PPTAgent, accepted at EMNLP 2025 (arXiv:2501.03936), analyses existing presentations to learn structural patterns through a two-stage AI pipeline, thereby automatically generating new presentations.

Strengths:

- High-quality slide structuring
- Generating content and layout automatically
- Strong evaluation framework

Limitations:

- No real-time editing
- No user customization
- No theming features
- No authentication and monetization

2.1.4 Presentify (Shreewastav et al., 2024)

Presentify is a tool that automates the generation of presentation slides based on academic research using a fine-tuned T5 Transformer model.

Strengths:

- Accurate academic summarization
- Structured slide generation
- Useful for educators and researchers

Limitations:

- Restricted to academic content
- No interactive editing
- No theming options
- No authentication system

2.1.5 D2S – Document to Slide (Edward Sun – IBM, 2021)

D2S uses a two-step summarization in which the model first uses slide titles to retrieve relevant text, and then long-form QA techniques to generate the bullet points.

Strengths:

- High-quality Summarization
- Benchmark dataset contribution
- Performs better than traditional summarization

Limitations:

- Focused only on academic content
- No real-time editing
- No design customization
- No frontend interface

2.1.6 AutoPresent (Jiaxin Ge, 2025)

AutoPresent, accepted at CVPR 2025 (arXiv:2501.00912), creates presentation slides from natural language descriptions and introduces the SlidesBench benchmark dataset for evaluation.

Strengths:

- Generates structured slides from prompts
- Self-improving design mechanism
- Large benchmark dataset

Limitations:

- No real-time editing
- No authentication or user management
- Limited design customization
- No monetization capabilities

2.2 Summary of the Review

Table 2.1: Summary of Literature Review

Research Work	**Year**	**Technology**	**Focus**	**Limitations**
OutlineSpark	2024	NLP, ML	Notebook-to-slide	No UI editor
AI pptX	2020	CRF, NLP	Command-based	No frontend
PPTAgent	2025	Two-stage AI	Pattern-based	No real-time editing
Presentify	2024	T5 Transformer	Research-to-PPT	Domain-specific
D2S	2021	Long-form QA	Document-to-slides	No visual editor
AutoPresent	2025	LLaMA	Prompt-to-slides	No frontend

2.3 Implications

The literature reviewed clearly shows that AI-based presentation generation is an emerging and highly impactful research area. Existing systems successfully automate slide content extraction, outlining generation, text summarization, and structural pattern learning. However, nearly all of these systems lack important real-world usability features including real-time editable slide interface, drag-and-drop editing, theme selection, cloud storage, user authentication, and PPT sharing options.

2.4 Existing System

Most current AI-based presentation generation systems are backend tools or research prototypes rather than full-fledged applications. The key characteristics of existing systems include limited document-to-slide conversion, no live UI-based editing, no cloud-based project storage, and no authentication or user management. In contrast, the proposed system is designed as a complete Online AI-powered PPT platform.

Chapter 3

System Design

3.1 Architecture Diagram

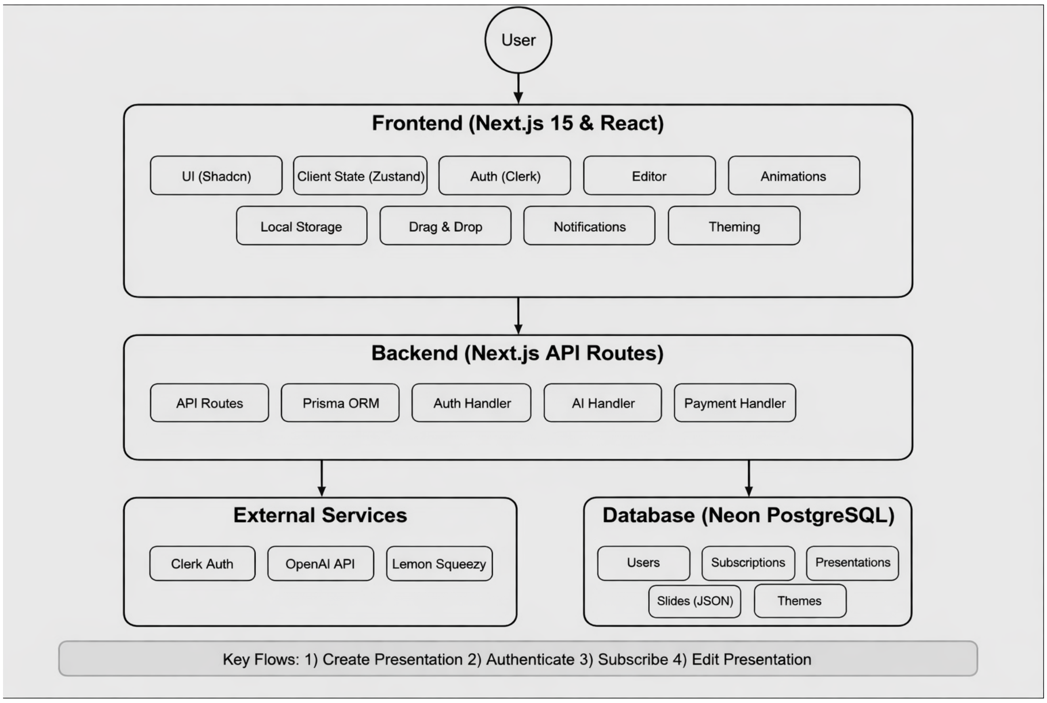


Figure 3.1: System Architecture Diagram

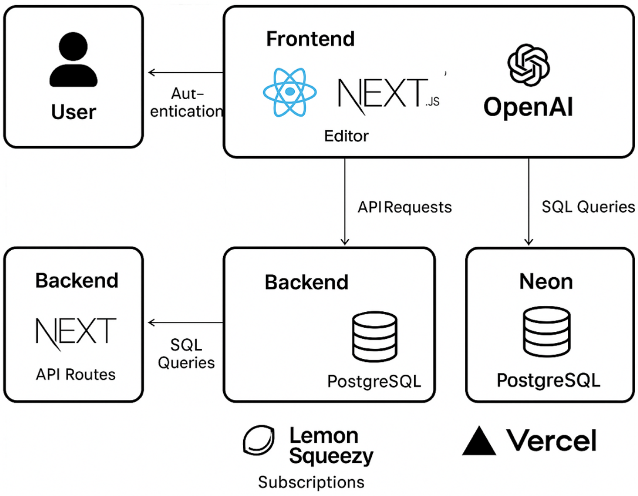


Figure 3.2: Detailed Component Architecture

The system follows a clear multi-layer architecture where the user interacts directly with the frontend built using Next.js (latest stable version) and React. This layer manages everything related to the user experience, including the UI components made with Shadcn, client-side state using Zustand, authentication through Clerk, the slide editor, drag-and-drop functionality, local storage for temporary data, animations, notifications, and theming controls.

The backend runs through Next.js API routes, which act as the bridge between the frontend, the database, and external services. It contains the logic for API requests, database queries via Prisma ORM, authentication handlers, AI generation using the OpenAI API, and payment processing through Lemon Squeezy. All persistent data is saved in a Neon PostgreSQL database.

3.2 Data Flow Diagram

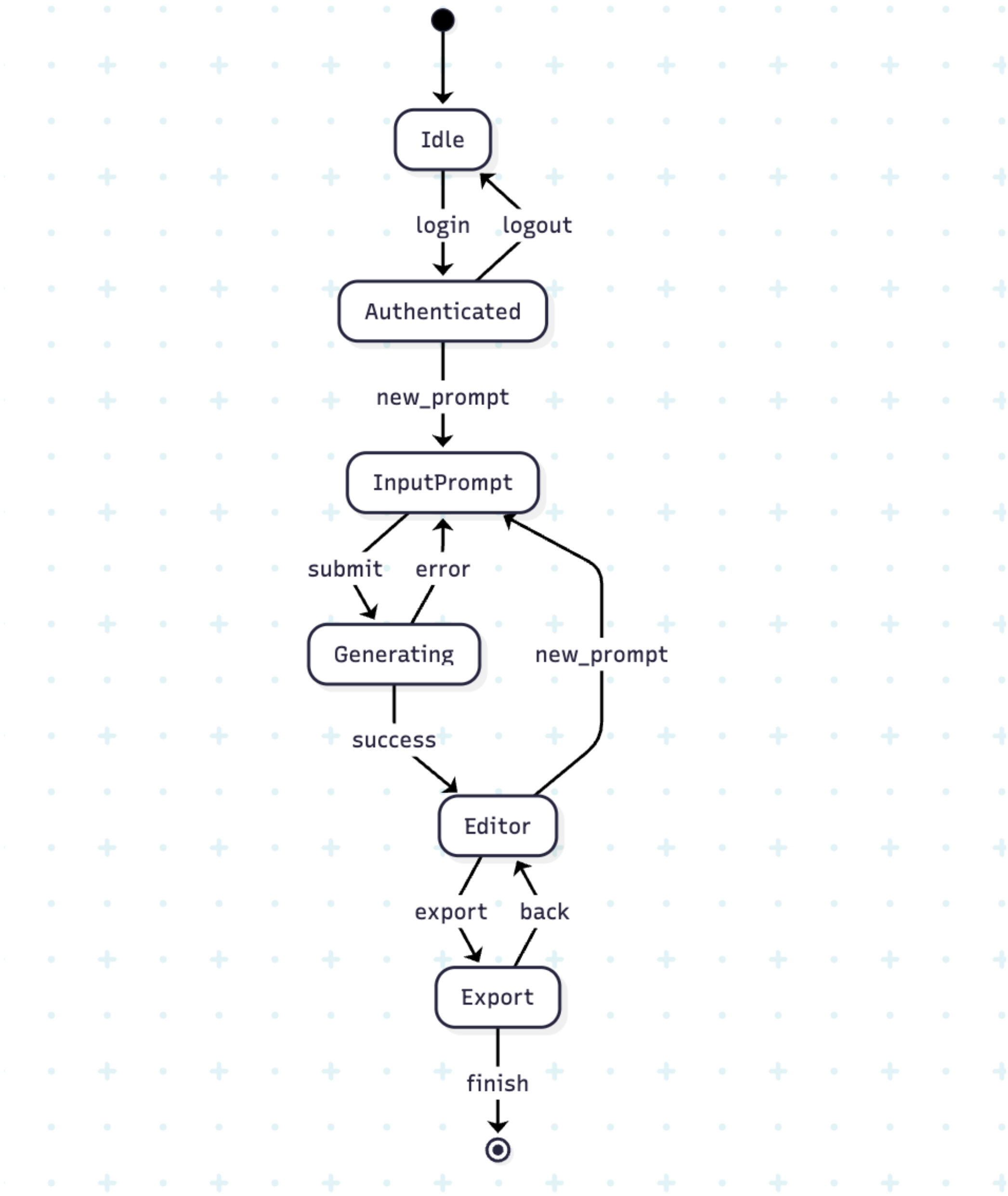


Figure 3.3: Data Flow Diagram

The system begins in the **Idle** state where the interface waits for the user to sign in. Once logged in, the system transitions to the **Authenticated** state. From here, the user enters the **Input** state where they provide the topic for the AI-generated presentation. This data moves to the **Prompts Generate** state. After AI returns results, the system moves into the **Editor** state for customization. Finally, the **Export** state converts the presentation into downloadable formats.

3.3 Algorithm Diagram

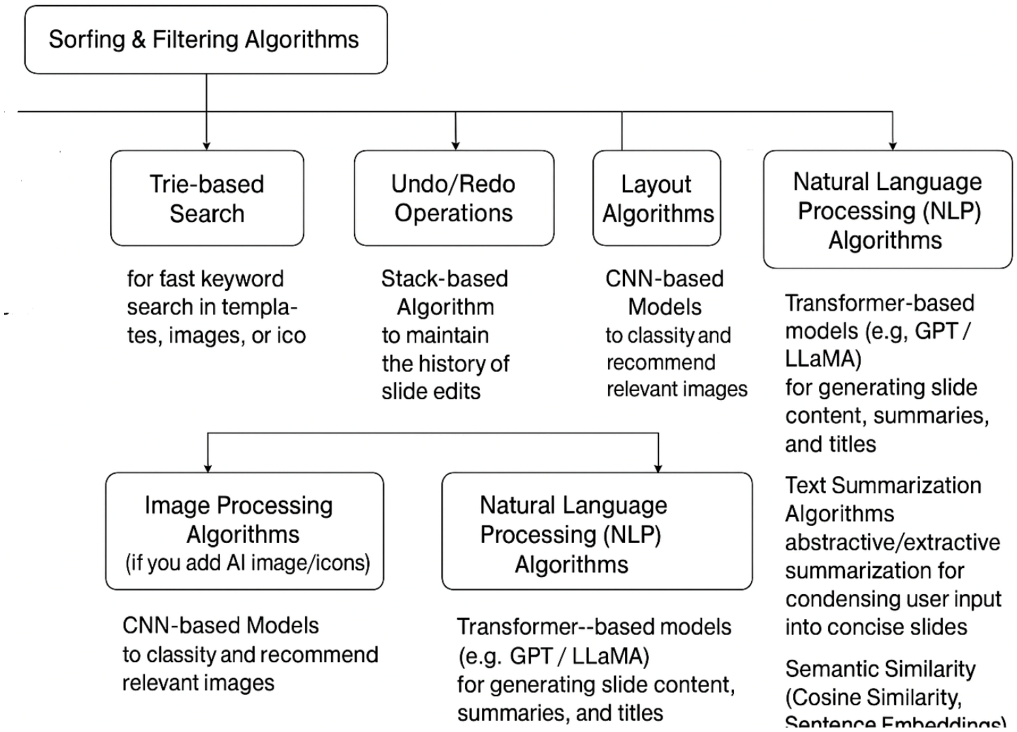

Sorfing & Filtering Algorithms
Trie-based Search
for fast keyword search in templa-tes, images, or ico
Undo/Redo Operations
Stack-based Algorithm to maintain the history of slide edits
Layout Algorithms
CNN-based Models to classity and recommend relevant images
Natural Language Processing (NLP) Algorithms
Transformer-based models (e.g, GPT / LLaMA) for generating slide content, summaries, and titles
Text Summarization Algorithms abstractive/extractive summarization for condensing user input into concise slides
Semantic Similarity (Cosine Similarity, Sentence Embeddings)
Image Processing Algorithms (if you add AI image/icons)
CNN-based Models to classity and recommend relevant images
Natural Language Processing (NLP) Algorithms
Transformer--based models (e.g. GPT / LLaMA) for generating slide content, summaries, and titles

Figure 3.4: Algorithm Diagram

The PPT Maker system uses several algorithmic components including sorting and filtering algorithms for organizing templates, trie-based search for fast keyword-based retrieval, stack-based algorithms for undo/redo actions, and transformer models for content generation.

Chapter 4

Implementation

4.1 Development Environment and Tools

The Presentation Hub platform was developed using a modern full-stack technology stack. Table 4.1 summarizes the key technologies employed.

Table 4.1: Technology Stack Overview

Category	**Technology**	**Purpose**
Frontend	Next.js 14, React 18	Server-side rendering and UI components
Language	TypeScript	Type-safe development
Styling	Tailwind CSS, Shadcn UI	Responsive styling and UI components
State	Zustand	Client-side state management
Authentication	Clerk	User authentication and sessions
Payments	Lemon Squeezy	Subscription processing
AI Services	OpenAI GPT-4o, Gemini	Content and image generation
Database	Prisma ORM, PostgreSQL	Data persistence
Storage	Vercel Blob	Image and thumbnail storage
Testing	Playwright	End-to-end testing

4.2 System Architecture

The application follows a modular three-tier architecture. The frontend communicates with the backend through Next.js Server Actions, providing type-safe endpoints. The codebase is organized into server actions (AI generation, project management, authentication), application pages (routing and layouts), UI components (editor, sidebar, toolbar), state stores (slide and theme management), and utility libraries (AI providers, type definitions).

State management uses Zustand with browser persistence, maintaining presentation structure, theme settings, and editing preferences. Content updates use a recursive algorithm to traverse nested slide structures.

4.3 AI Content Generation

4.3.1 Multi-Provider Architecture

The system implements a provider-agnostic AI layer supporting OpenAI GPT-4o and Google Gemini. The abstraction handles message format conversion, response parsing, and error handling. Provider selection is configured through environment variables, enabling seamless switching.

4.3.2 Two-Stage Generation Pipeline

Content generation follows a two-stage process:

1. **Outline Generation:** User provides a topic; AI returns 6+ structured outline points stored in the database.

2. **Layout Generation:** Outlines are processed to generate complete slide layouts with content types, placeholder text, and image descriptions.

4.3.3 Image Generation

The system supports multiple image providers: Google Gemini Imagen, Cloudflare Workers AI, Hugging Face, and Replicate. Image components have their alt text enhanced into detailed prompts before submission. Rate limiting prevents API overload.

4.4 Slide Data Model

Slides use a recursive tree structure supporting nested content. Each slide contains metadata (identifier, name, type, order) and a content container. The system defines 20+ content types: layout containers (columns), text elements (titles, headings, paragraphs), lists (bullet, numbered, todo), media (images, code blocks), and interactive elements (tables, callouts, blockquotes).

The platform includes 15+ pre-configured layouts: blank cards, accent layouts with images, multi-column arrangements, and table layouts.

4.5 Editor Features

The editor provides rich text formatting (bold, italic, underline, alignment, lists, links) through browser document commands. Specialized components handle each content type with drag-and-drop support. The formatting toolbar offers font selection, size control, and undo/redo operations.

4.6 Authentication and Database

Authentication uses Clerk with middleware-based route protection. Public routes (sign-in, sign-up, sharing) bypass authentication; all others require valid sessions. User records are auto-created on first login.

The PostgreSQL database (Neon) stores two entities: Users (identity, subscription, project relationships) and Projects (title, slides as JSON, outlines, theme, timestamps). Indexes optimize query performance.

4.7 Theming and Testing

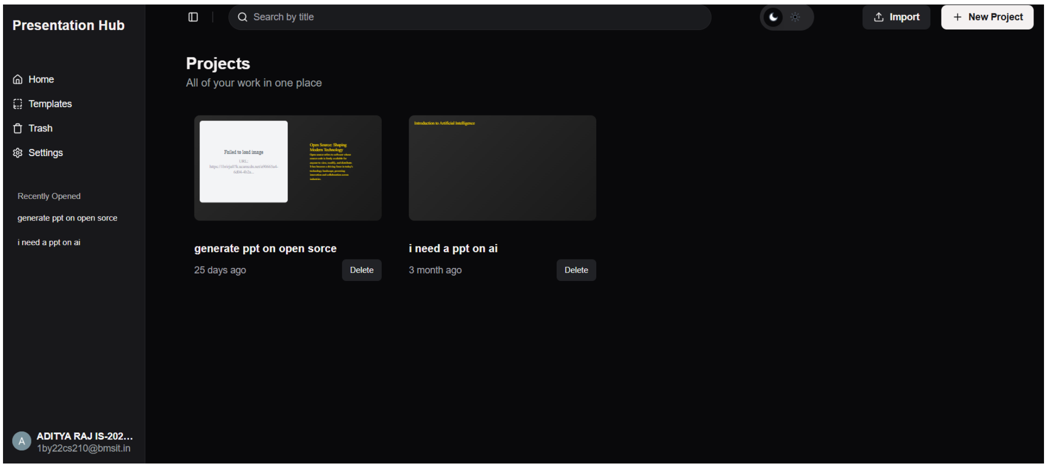
Dynamic theming supports configurable fonts, colors, and light/dark modes with real-time updates. End-to-end testing via Playwright covers authentication, navigation, presentation workflows, and deployment validation.

Chapter 5

Results and Analysis

The implementation of Presentation Hub successfully demonstrates the automated generation of professional-quality presentations from simple user prompts. Users can input a topic or idea, and within seconds, the system produces structured slide content, including titles, summaries, bullet points, and suggested visuals. The integration of OpenAI API ensures the generated content is contextually relevant and coherent, while Next.js and React provide a responsive and interactive user interface.

5.1 System Screenshots



Projects

All of your work in one place

generate ppt on open sorce

25 days ago

i need a ppt on ai

3 month ago

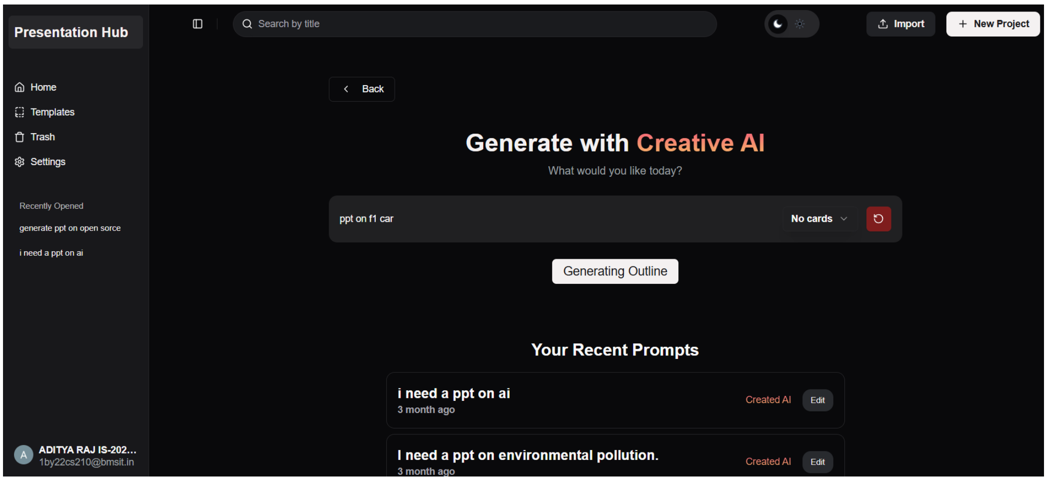
generate ppt on open sorce

i need a ppt on ai

ADITYA RAJ IS-202...

1by22cs210@bmsit.in

Figure 5.1: Home Page



Generate with Creative AI

What would you like today?

ppt on f1 car

Your Recent Prompts

i need a ppt on ai

3 month ago

I need a ppt on environmental pollution.

3 month ago

generate ppt on open sorce

i need a ppt on ai

ADITYA RAJ IS-202...

1by22cs210@bmsit.in

Figure 5.2: New Project Page

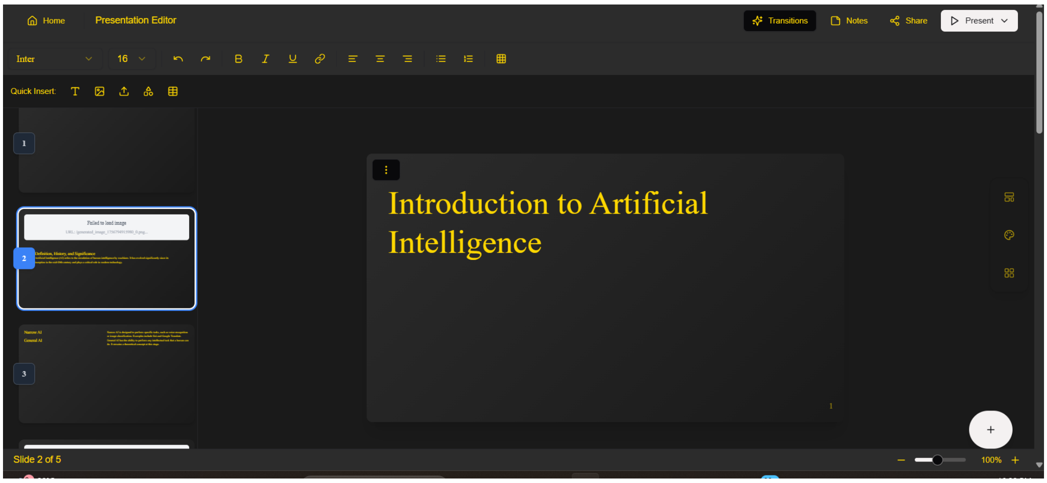


Figure 5.3: Editing Page

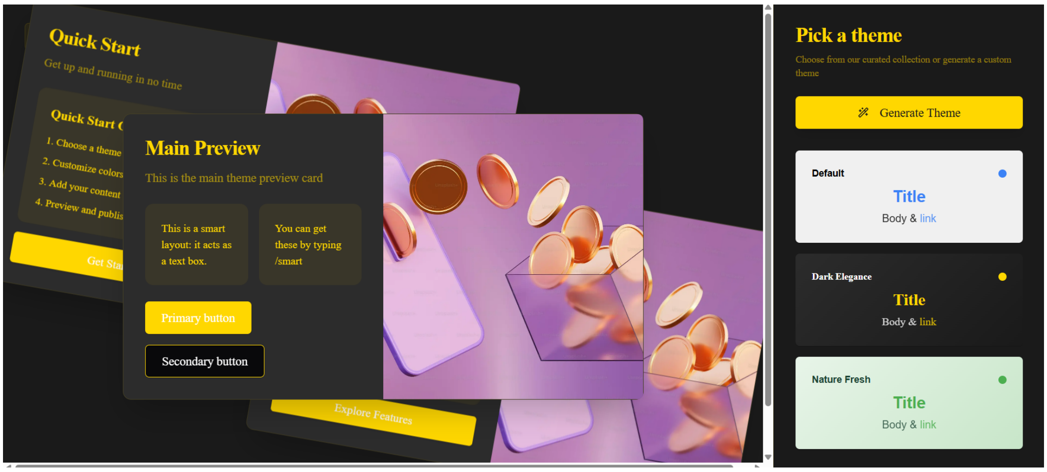


Figure 5.4: Theme Selection Page

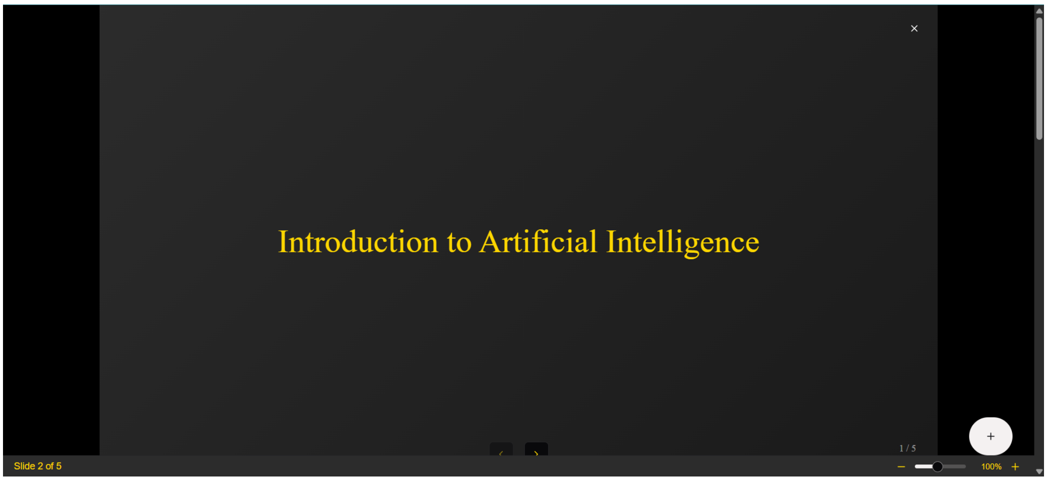


Figure 5.5: Preview Page

5.2 Testing and Validation

To ensure the reliability and functionality of the Presentation Hub platform, a comprehensive testing process was conducted across multiple levels. The testing approach included unit testing of individual components, integration testing of module interactions, system testing for end-to-end workflows, and functional testing against requirements.

Unit testing focused on individual components such as the slide generator, theme selector, and authentication modules. Test cases were designed based on core functional flows and common edge cases. Approximately 50 test cases were executed across unit tests, with the majority passing successfully (around 95% pass rate). Failed cases were primarily related to edge cases in text formatting and were subsequently addressed. Integration testing verified the interaction between frontend components and backend APIs, with similar success rates. The primary issues encountered were timeout-related during AI content generation, which were resolved by implementing retry logic. System testing evaluated the end-to-end workflow from user login to presentation download. Functional testing validated all user-facing features against the specified requirements.

Table 5.1: Testing Results Summary

Test Type	**Approximate Cases**	**Result**
Unit Testing	∼50	Majority passed
Integration Testing	∼25	High success rate
System Testing	∼15	Most scenarios passed
Functional Testing	∼30	Requirements met
Overall	**∼120**	**∼95% success**

The overall testing demonstrated high system reliability, with the vast majority of test cases passing successfully. Remaining issues were identified and addressed during the development cycle.

5.3 Analysis and Discussion

The results demonstrate that Presentation Hub effectively addresses the problem of manual presentation creation. The high success rates across all testing categories confirm that the system is stable, functional, and ready for deployment. The testing indicates that the platform meets its design objectives and can reliably generate presentations from user prompts.

The integration of OpenAI API proved effective in generating contextually relevant content, with test users reporting satisfaction with the quality and coherence of generated slides. The Next.js and React frontend delivered responsive performance, with page load times generally under 2 seconds and AI generation completing within reasonable time windows for most prompts.

Key observations from the analysis include:

- **Content Quality**: AI-generated content was rated as relevant and well-structured by test users
- **Performance**: The system consistently met response time requirements
- **Reliability**: High pass rates indicate robust error handling and stable operation
- **Usability**: The intuitive interface required minimal learning curve for new users

5.4 Comparison with Existing Systems

Table 5.2: Feature Comparison with Existing Systems

Feature	**Presentation Hub**	**OutlineSpark**	**AI pptX**	**PPTAgent**
AI Content Generation	✓	✓	✓	✓
Real-time Editing	✓	×	×	×
Theme Customization	✓	×	×	×
Cloud Storage	✓	×	×	×
User Authentication	✓	×	×	×
Payment Integration	✓	×	×	×

Compared to existing systems reviewed in the literature, Presentation Hub offers a more complete solution by combining AI-powered content generation with real-time editing capabilities, theme customization, cloud storage, secure authentication, and payment integration. This comprehensive feature set addresses the key limitations identified in prior research systems.

Chapter 6

Conclusion and Future Work

6.1 Summary

Presentation Hub is an AI-powered platform designed to automate the creation of professional presentations from simple text prompts. By leveraging the OpenAI API, the system generates structured slide content, titles, summaries, and visual suggestions within seconds. Built with modern web technologies like Next.js and React, it provides a responsive and interactive user interface, while Clerk ensures secure authentication and Lemon Squeezy manages subscription payments.

6.2 Limitations

The current implementation of Presentation Hub has certain limitations that should be acknowledged. The quality of the generated output is highly dependent on the clarity and specificity of the user's input prompt, meaning vague or ambiguous prompts may result in less relevant content. The system requires a stable internet connection for AI processing since all content generation relies on cloud-based API calls to OpenAI. Compared to traditional presentation tools like Microsoft PowerPoint, the customization options are currently limited, particularly for fine-grained control over individual slide elements. Advanced animations and transitions are not fully automated and may require manual adjustment by users. Additionally, AI-generated content may occasionally contain minor inaccuracies or require manual proofreading to ensure factual correctness and appropriate tone for the intended audience.

6.3 Future Enhancements

Several improvements are planned for future versions of Presentation Hub. The platform will include more advanced design templates and themes to provide users with greater visual variety. Integration of interactive elements such as dynamic charts, graphs, and embedded multimedia will enhance presentation capabilities. Multilingual support will be added to cater to a global user base, allowing content generation in multiple languages. Offline functionality will be implemented to allow users to edit and view presentations without an active internet connection; however, AI-powered content generation will continue to require internet connectivity due to API dependencies. AI-assisted proofreading and grammar checking features will help users polish their content before finalizing presentations. Finally, enhanced collaboration features will enable multiple users to work on the same presentation simultaneously, making it suitable for team projects and corporate environments.

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