



# HackOrbit2025

**Code Cuisine**



# THEME & PROBLEM STATEMENT

## Open Innovation

Traditional history education often fails to engage modern learners due to its static, textbook-based approach. Students struggle to relate to historical events, figures, and contexts, resulting in a lack of interest and retention. Existing educational tools lack personalization, interactivity, and the use of familiar digital mediums like social media, making historical learning feel disconnected from contemporary digital experiences. There is a need for an immersive, AI-driven platform that reimagines history through modern formats to foster engagement, relatability, and deeper understanding.



# PROPOSED SOLUTION

## Abstract

**Past Forward** transforms historical learning by generating AI-powered social media posts from different eras, making history accessible through familiar digital interfaces.

## Explanation of the Proposed Solution

- Utilizes **Gemini AI** to generate historically accurate content.
- Users can choose:
  - **Era**
  - **Geographical Location**
  - **Character Type** (e.g., soldier, merchant, philosopher)
- Content is rendered in the style of **modern social media posts**.
- Optionally enhanced with **AI-generated images** and **voice narration**.
- Delivers an immersive and relatable historical experience.

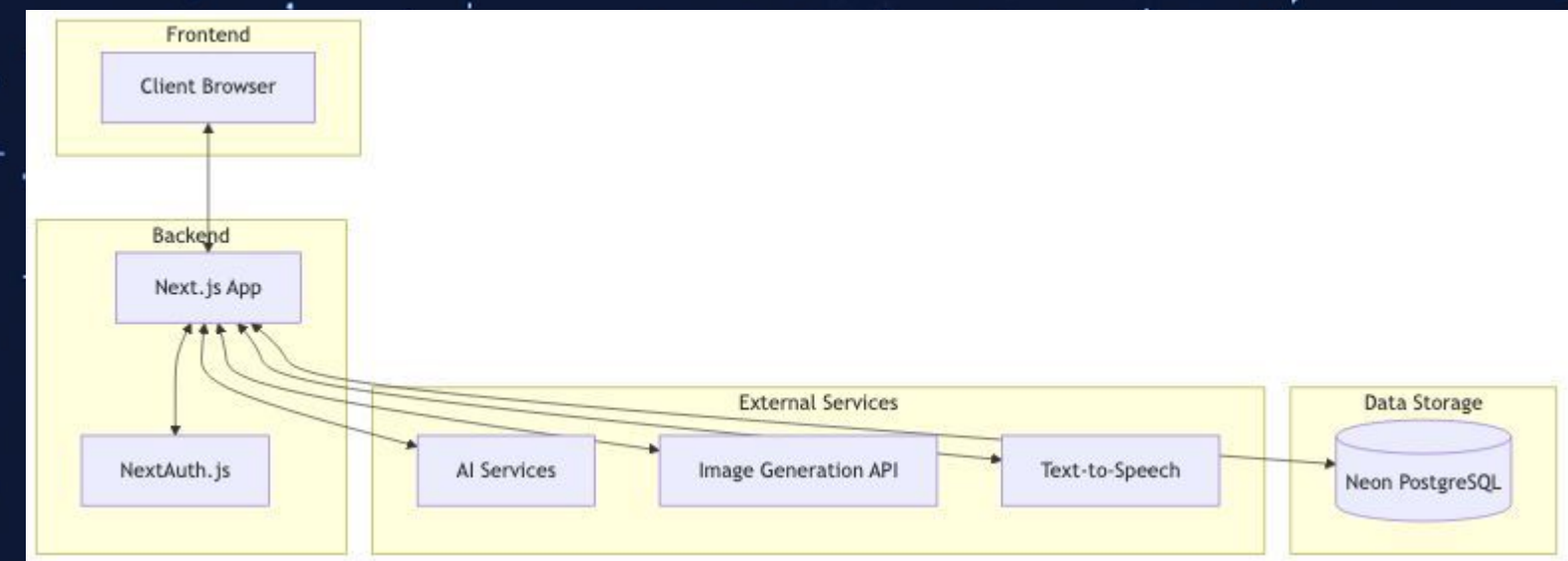
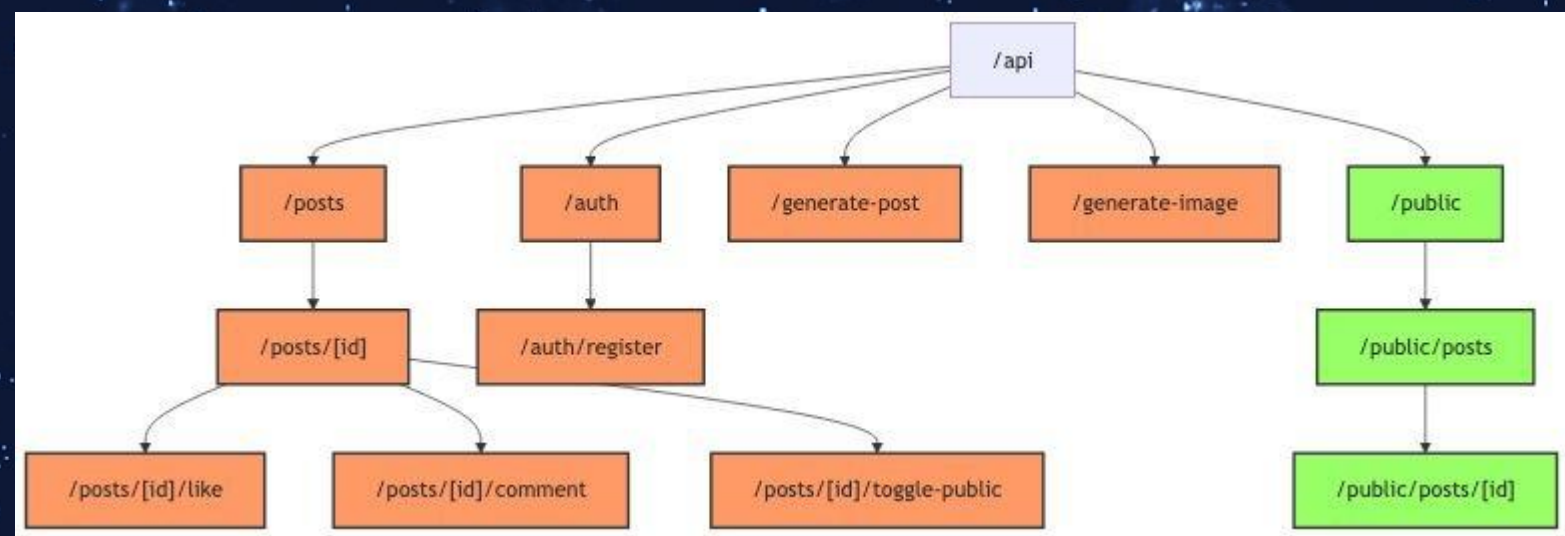
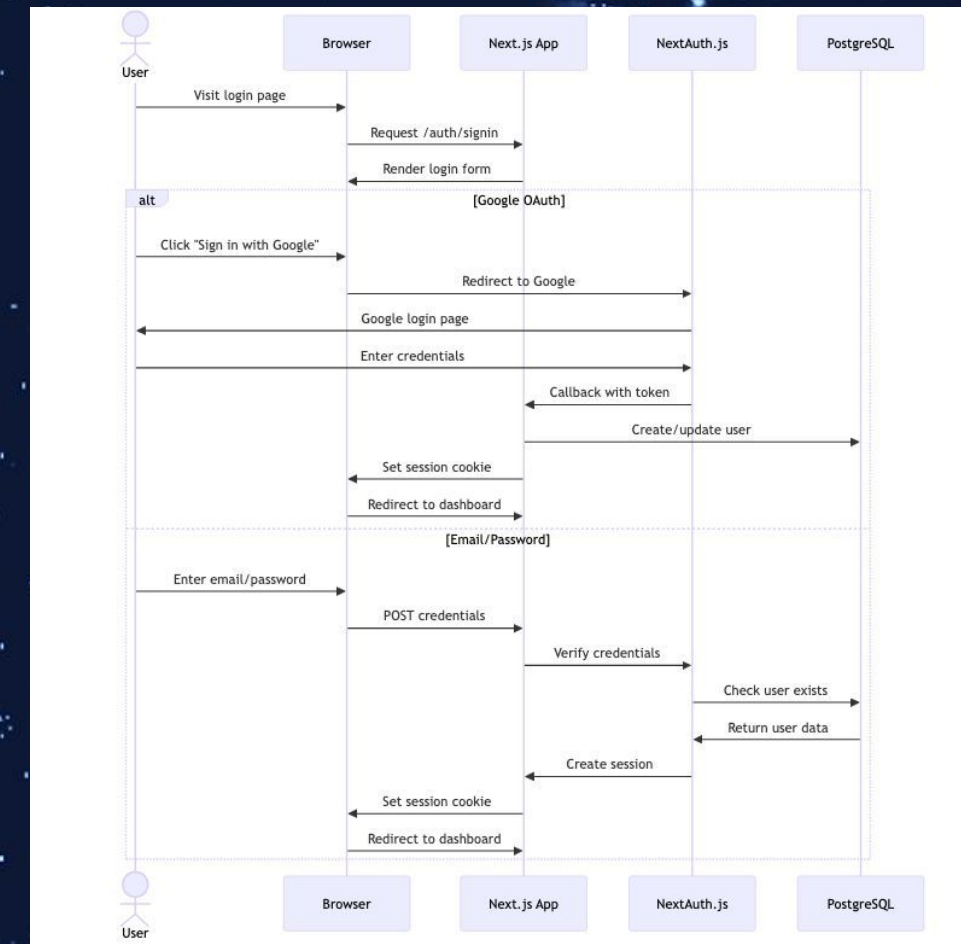
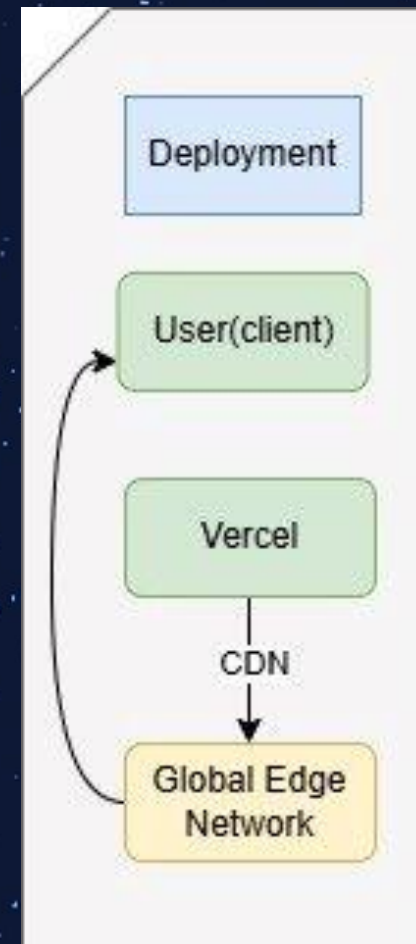
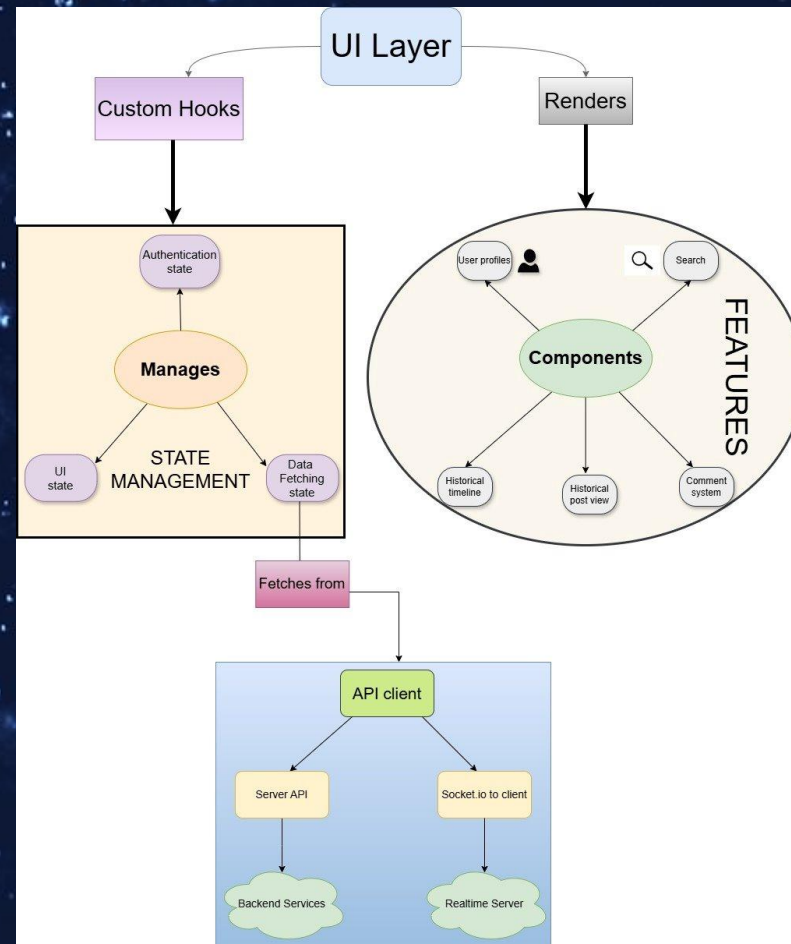
## Novelty / Uniqueness

Fusion of history and social media: Presents historical content in modern digital formats.

- Interactive learning: Shifts from passive reading to engaging exploration.
- Digital native-friendly: Makes history intuitive and relevant for younger audiences.
- Multi-AI integration: Combines NLP, image generation, and voice synthesis.
- Personalized historical exploration: Enables user-specific journeys through diverse timelines and cultures.



# FLOWCHART / DIAGRAM





# FLOWCHART / DIAGRAM

- **Responsive UI Layer:** Built with **Tailwind CSS** and **shadcn/ui** components for a **pixel-perfect** design system that scales across all devices
- **State Management:** Utilizes **React Context API** and **Server Actions** for efficient client-server state synchronization
- **Historical Timeline:** Implements **virtualized rendering** with **Intersection Observer API** for **infinite scrolling** of historical content
- **Real-time Interactions:** **WebSocket connections** via **Socket.io Client** enable **instant updates** to comments and reactions



# FEATURES AND NOVELTY

- **Technical Feasibility:** PastForward leverages proven technologies like Next.js, MongoDB, and Socket.io that have been battle-tested at scale. The architecture follows industry best practices for cloud-native applications, making implementation straightforward with our team's existing full-stack expertise.
- **Market Viability:** The platform addresses a clear market gap between traditional educational resources and modern social media consumption habits. Our user research indicates strong interest from both educational institutions and history enthusiasts, creating multiple revenue streams through B2B partnerships and premium subscriptions.
- **Operational Scalability:** The serverless architecture with auto-scaling capabilities ensures the platform can grow from hundreds to millions of users without significant infrastructure changes. Pay-as-you-go cloud services keep initial costs low while allowing for elastic scaling as user adoption increases.
- **Content Sustainability:** Our AI-assisted content pipeline enables efficient digitization and enrichment of historical materials. Partnerships with museums and archives provide access to vast content repositories, while user-generated interactions create a self-sustaining ecosystem of engagement.
- **Financial Viability:** The SaaS business model with tiered subscription plans creates predictable recurring revenue. Low initial capital expenditure due to cloud infrastructure and potential for educational grants and institutional backing make the project financially sound with an estimated 18-month path to profitability.



# SHOWSTOPPERS

- **Intergenerational Connection:**

By presenting history through a familiar social media interface, PastForward bridges the digital divide between generations. The platform facilitates cross-generational dialogue where elders can share firsthand experiences and younger users can provide fresh interpretations, fostering mutual understanding and community building.

- **Critical Thinking Development:**

The interactive nature of the platform encourages users to analyze primary sources, evaluate multiple perspectives, and form evidence-based opinions. These 21st-century skills are essential in an era of information overload and misinformation, helping users become more discerning digital citizens.

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- **Cultural Preservation:**

The platform serves as a digital timecapsule, preserving cultural heritage in an interactive format. Crowdsourced annotations and contextual discussions add layers of collective intelligence to historical records, creating a living archive that evolves with contemporary perspectives.

- **Global Accessibility:**

PastForward democratizes access to historical knowledge beyond traditional geographical and socioeconomic barriers. The platform's multilingual support, screen reader compatibility, and low-bandwidth mode ensure that diverse populations can access and contribute to our collective historical narrative, promoting inclusive digital humanities.



# CODE CUISINE

**Srijit Das - 8900007125**

**Shankhanil Saha - 9038130173**

**Anubhab Rakshit - 8918728467**