Behind the Bill – Project Report

1 Problem Statement & Motivation

Politics can feel distant, confusing, and often irrelevant, especially for young or first-time voters who are just starting to engage with the political landscape. The language of policy is often abstract, dense, and disconnected from personal relevance, making it hard to see how it impacts day to day life. This disconnect not only fosters civic disengagement but also limits awareness of the tangible consequences of governmental decisions.

Behind the Bill was built to bridge this gap. It turns complex, intimidating legislative content into interactive, accessible, and emotionally resonant experiences. The app helps users engage with policy issues in a way that feels personally meaningful, making it easier to understand, simulate, and connect with political events, and most importantly, how those events affect them.

2 Approach, Methodologies & AI Techniques

Overall Approach
At the core of our app is the belief that learning about politics should be interactive, engaging, and relatable. We built a mobile-first platform that uses gamification to make civic learning fun and interactive. Users can swipe through a feed of current political news, enhanced by three powerful AI tools:

Core Tool	What It Does	Key Tech
Legislative Impact Simulator	Visualizes the potential social, economic, and environmental impacts of a bill or policy	Structured historical data, NLP classification
Context Provider	Provides background on a topic or bill, showing how it's been handled in different states and countries	Large Language Models (LLMs)
Chatbot Explainer with Personas	Lets users have interactive conversations with simulated	LLM personas

politicians or everyday personas,
like a teenager or a policy expert

Methodologies

We followed a user centered design approach with rapid feedback loops (including informal tests and in app surveys) to ensure the app was intuitive and engaging. Our modular architecture in React Native ensures a responsive experience across devices, making it easy to scale and iterate.

To keep things efficient and straightforward, we designed the app without a custom backend. All the data fetching, AI integrations, and content processing are done client-side, making it faster and more responsive.

Data / AI Integrations

- **OpenAI API** – summarization, chat, highlighting

- **NewsAPI.org** – real-time headlines

AI Techniques Employed

- Natural Language Processing:
    - Entity recognition (political terms, names, policies)
    - Text processing and content analysis
- LLMs:
    - OpenAI GPT-3.5-turbo integration
    - Policy explanation and context generation
    - Political figure dialogue simulation

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3 Results, Evaluation & Key Findings

We successfully built a prototype that includes the interactive news feed, the impact simulator, and the chatbot personas. While we have not conducted formal testing yet, we relied on informal user feedback from friends, colleagues, and peers to shape the design and functionality of the app. Based on their feedback:

- Users appreciated the engagement of the chatbot personas, with many expressing that interacting with simulated politicians or relatable figures helped make the policy content feel more human and accessible.
- The Legislative Impact Simulator was well-received for its ability to help users visualize the effects of legislation in clear, understandable terms.
- Key Insight: The combination of emotional relatability (personas) and structured information (context cards & simulations) resonated most with users. This feedback reaffirmed our belief that bridging the gap between emotion and information is essential for encouraging civic engagement.

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4 Ethical Considerations & Potential Impact

Bias Mitigation:

We worked hard to ensure the app presents a balanced perspective. All prompts for our AI powered features are designed to represent multiple ideological viewpoints, and all facts are sourced from public legislative data, making it transparent and trustworthy.

Privacy:

No personal accounts are required to use the app, and data is stored locally by default. Users can opt in for usage analytics, but their privacy is always our priority.

Impact:

Behind the Bill is aimed at increasing political literacy, especially among underserved demographics who are most likely to feel disconnected from the political process. By making political content accessible and emotionally resonant, we hope to encourage informed participation and empower users to feel confident in their ability to understand and influence the policies that shape their lives.

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5 Future Improvements & Scalability

- While the app is already functional, there are many exciting opportunities to expand its reach and deepen its impact:

- News Algorithm: Implement personalized recommendations to keep users engaged by showing them the most relevant headlines based on their interests, location, or previous interactions.
- Voting Record Data: Add real politicians' voting records to the chatbot personas, allowing users to learn more about the political stances and voting behaviors of elected officials.
- Social Features: Introduce a sharing feature, where users can discuss articles or policy issues with friends or in groups, fostering collaborative learning and social interaction.
- Classroom Edition: Develop a version of the app designed for educators and civic education courses, offering teachers tools to guide students through political processes and engage them in debates.
- Adaptive Difficulty: As users interact more with the app, we could introduce personalized learning tracks that adapt the content's difficulty and focus based on their engagement level, making the learning process even more personalized and efficient.