

AI-Powered YouTube Video Summarizer

Team Information

Team Name: Breaking bots

Team Members:

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Project Overview

Our Chrome extension uses AI to simplify and summarize YouTube videos, making it easier for users to quickly grasp the core ideas without watching the entire video. It provides bullet points, timestamps, topic-wise segmentation, and more in an easy-to-read format.

Key Features

1. AI-Powered Summarization:

- Automatic transcript extraction from YouTube videos
- Summarization using models like GPT, Gemini, or BART
- Output formats: bullet points, concise paragraphs, topic-wise, timestamps

2. Customization Options:

- Adjustable summary length (short, medium, long)
- Focus area selection (key takeaways, definitions, Q&A)
- Highlight most-used keywords

3. Chrome Extension Interface:

- One-click summarization directly on YouTube
- Floating summary widget
- Dark mode and theme customization

AI-Powered YouTube Video Summarizer

4. Multi-Language Support:

- Summarization in multiple languages (based on transcript availability)

5. Export & Sharing:

- Download summary as text
- Copy to clipboard

The Problem It Solves

This extension helps students, researchers, and busy professionals save time by quickly summarizing long educational or informational YouTube videos. It enables users to consume content more efficiently and revisit key points without watching the entire video again.

Challenges We Ran Into

We faced CORS issues when connecting the extension to the backend and ensuring smooth service worker registration. We overcame them with proper headers and improved extension manifest handling. Integrating AI models with a clean UI also required extensive testing and optimization.

Fit in Web Development Track

This project combines frontend (React with Vite), backend (Python with FastAPI), and browser extension development. It highlights modern web architecture by integrating AI into user-facing tools and emphasizes user experience, scalability, and real-time content processing.