

# proj expla

Wednesday, November 5, 2025 4:57 PM

## why we created this project :

- Problem: Have you ever opened a GitHub repo and struggled to understand what changed because the commit messages were vague? That's the problem we wanted to solve
- Need: There's a gap for an automation tool that can summarize actual code changes, independent of the original commit message.
  - plus a way to ask questions regarding project
- Solution: DevInsights uses AI to generate concise summaries of commits, making it easier to understand changes without reading the entire diff.

## workflow :-

- user adds the github repo
- repo data is passed into the gemini api, gemini summarizes all the git diff differently and the final result is stored into database
  - during this process the vector embeddings of the data is also generated so that later it can be used for enhanced natural language code search
    - (basically using vectors so that Ai can answer user questions regarding the project)
  - **vector embedding** :-
    - Vector embedding is a way to turn text or code into numbers so that computers can understand their meaning. Think of it like giving every piece of text a unique "fingerprint" based on what it means.
    - when user asks a question their input is turned into numbers and then Gemini will search through similar matching numbers (that are already stored )
    - This makes it easy for AI to compare and find related items. In DevInsights, we use vector embeddings so you can search your code using plain English, and the system will find the most relevant snippets by comparing these fingerprints instead of just matching keywords.

## tech stack :-

1. Bun :-
  - a. it's better than npm because it's faster , more optimized
  - b. and if you create a docker image from it that image takes 3times less size than npm file
2. TailwindCSS :-
  - a. We use Tailwind CSS because it lets you quickly style websites using small, reusable utility classes without writing custom CSS.
3. NextJS :-
  - a. We use Next.js instead of plain React because it offers server-side rendering, static site generation, and routing out of the box, which makes apps faster and SEO-friendly. Plus, with Next.js, you don't need separate backend and frontend folders—you can handle both in a single project using API routes.
4. Gemini API
5. Github API
6. Clerk :- provides simple authentication
7. Neon Console (PostgreSQL) :-
  - a. used this because Neon Console provides cloud database and hence it's easy to host the website rather than shifting later
8. Stripe (billing service)

- a. stripe is widely used and it supports secure payments
- 9. TypeScript :-
  - a. We use TypeScript instead of plain JavaScript because it adds static typing, which catches errors at compile time rather than runtime. This makes code more predictable, maintainable, and easier to refactor, especially in large projects, whereas JavaScript can lead to hidden bugs that only appear when the code runs.
  - b. its syntax & working is similar to JS
- 10. LangChain :-
  - a. LangChain is used to build applications that integrate large language models (LLMs) with external data and tools. It helps manage prompts, chains of LLM calls, memory, and agents, making it easier to create things like chatbots, question-answering systems, and AI workflows that go beyond simple text generation.

## other features :-

- apart from just summarizing commits it also supports summarizing meeting records
  - this way if there's some recording which is just huge pain in the head you can just summarize that whole recording
- billing :-
  - we are using credit based system
  - and loading a GitHub project into Dev Insights will use some credits
  - users can buy more credits for larger files
  - this way it becomes a service that can be sold
- collaboration
  - you can add other users into your project as well so the whole team can view the AI summarizes
- AI code search
  - using the vector embeddings users can ask the AI about project, its code, its files
  - this way anyone new won't have any issue understanding the code base
  - and you can save your questions as well