

Full-Stack Developer Take-Home Assignment

Project: AI Video Generation with Google Gemini (Veo3)

Overview

Create a simple web application that demonstrates Google Gemini's (Veo3) video generation capabilities through two specific use cases. This project should showcase your ability to quickly build an MVP that integrates AI capabilities into a user-friendly interface.

Technical Requirements

- Frontend: React/Next.js with TypeScript and Tailwind CSS
- Backend: Node.js with Express/NestJS
- API Integration: Google Gemini (Veo3) API
- Deployment: Provide a live demo URL and GitHub repository

Project Tasks

Your application should implement **both** of the following use cases:

Use Case 1: Marketing Video Generator for "Suplimax" Energy Drink

Create a simple interface that:

- Allows users to input key product features for "Suplimax" energy drink
- Generates a short marketing video using Google Gemini (Veo3)
- Provides basic customization options (tone, target audience, video style)
- Displays the generated video with download option

Important: You should prompt engineer an energy drink image with the name "Suplimax" visible on it. You can be creative with the design of the drink - the specific appearance doesn't matter as long as the name "Suplimax" is clearly visible. Your application should then use this image and your prompt engineering to generate the marketing video.

Use Case 2: Real Estate Video Tour Generator

Create a simple interface that:

- Allows input of property details from the listing below
- Generates a virtual property tour video using Google Gemini (Veo3)
- Provides options for different tour styles (luxury, family-friendly, etc.)
- Displays the generated video with download option

Important: You must use the exact property listing provided below for consistency. All candidates will use this same listing to generate their video tours.

Sample Real Estate Listing

Use this specific property listing for your video tour generator:

Property URL: <https://www.redfin.com/CA/Beverly-Hills/12012-Crest-Ct-90210/home/6823855>

Property Details:

- Address: 12012 Crest Ct, Beverly Hills, CA 90210
- Price: \$10,183,985
- Bedrooms: 5
- Bathrooms: 6.5
- Square Footage: 6,100
- Features: Luxury estate, three-car garage, landscaped grounds, elegant entrance with grand staircase, modern design, prime Beverly Hills location

Evaluation Criteria

1. **Functionality:** Does the application successfully implement both use cases?
2. **Code Quality:** Is the code well-structured, typed correctly, and maintainable?
3. **UI/UX Design:** Is the interface intuitive and visually appealing?
4. **API Integration:** Is the Google Gemini API integrated effectively?
5. **Speed of Execution:** How quickly were you able to build a working prototype?

Submission Guidelines

- Complete the project within 2-3 days
- Provide a GitHub repository with clear documentation
- Deploy the application to a hosting platform (Vercel, Netlify, etc.)
- Prepare a 10-minute presentation explaining:
 - Your approach and technical decisions
 - Challenges faced and how you overcame them

- How you would extend the application with more time
- How you leveraged AI tools (like Cursor AI) in your development process

Resources

- Google Gemini API Documentation: <https://ai.google.dev/gemini-api/docs>
- Next.js Documentation: <https://nextjs.org/docs>
- Tailwind CSS Documentation: <https://tailwindcss.com/docs>