1st Problem: Time Delay in AI Reasoning in System

✅ Solution: Using Gemini 2.0 Flash for Faster AI Response directly in Frontend’s Backend Route.

✅ Pros:

✔ Low Latency: Gemini 2.0 Flash is optimized for quick response times.

✔ Direct Frontend Integration: Eliminates backend delays, reducing request-processing time.

✅ Solution: Building specific LLM related to our problem statement which will provide accurate response in less time.

❌ Cons:

✖ Limited Context Handling leading to inaccurate summary generation which may struggle with complex multi-step reasoning.

✖ Less Customization: Gemini 2.0 Flash might not provide deep customization for domain-specific tasks.

✖ Cloud Dependency: Requires internet connectivity, so offline reasoning is not possible.

✖ High computational time.

2nd Problem: AI-Generated Exoplanet Images in Frontend

✅ Solution: Using FramerMotion for Dynamic Visual Structure of Exoplanets

✅ Pros:

✔ Customizable & Lightweight: FramerMotion provides real-time rendering and smooth animations.

✔ Lower System Requirements: No need for high-end GPUs like in AI-based image generation.

✔ Better Control Over Visual Accuracy: You can tweak the parameters, colors, and structure manually.

✔ No API Costs: Unlike DALL·E or BioNemo, FramerMotion doesn’t require expensive API calls.

❌ Cons:

✖ Lack of AI-Based Realism: AI-generated images provide natural-looking planets, while FramerMotion is manual-based visualization.