Visual Learning Pattern Analysis + AI Video Synthesis System

Video Link: -> How Web Sockets work | Deep Dive

Objective

Create a hybrid system where:

- **Manual Step:** The Engineer watches the reference video and identifies the visualization style.
- **Automatic Step:** AI generates a new MP4 video in that style for any topic.

PART A — Manual Research Task

1. Analyze the reference video (Manual)

The engineer must watch the video link provided and manually document:

Visualization Style

- 2D explainer
- line-based animation
- flowchart + arrow animations
- character-based
- whiteboard/doodle
- UI walkthrough
- kinetic typography
- infographic motion graphics
- storytelling scenes

This becomes the foundation for the AI. Create an Goggle docs for report generation.

PART B — Automatic System (Prototype)

2. Topic → Script (AI Automatic)

Given any topic, AI automatically generates:

- narration script
- scene-by-scene concepts
- short explanations
- voice-over text

3. Script → Animation Blueprint (AI Automatic)

AI converts the script + manual style_profile into:

- storyboard
- element list
- animation instructions
- timing
- transitions
- prompts for asset generation

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4. Blueprint → MP4 Video (AI Automatic)

The prototype should automatically generate a video by:

Tools allowed

- Lottie
- Manim
- FFMPEG
- Pika / Runway (API-based video gen)
- Any internal or open-source animation framework

The MP4 must include:

Visuals based on the blueprint
- Text overlays
- Basic transitions
- Optional narration (AI TTS)