Roadmap for the Project

Name: Kapil, Stream: AIML

Task: Smart Image Updater

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What is This Project?

I'm trying to make a web tool that helps find and fix missing images in a catalog.

- 1.It shows a list of projects that don't have images.
- 2. Fetches relevant images from the web
- 3.It searches for pictures of those products from the internet.
- 4. The tool then resizes the image to a square shape (500x500).
- 5. Finally, it saves the image and updates the database with the new image path.

Tech Stack:

- 1.Frontend HTML,CSS,JS
- 2.Backend FastAPI
- 3.Storage JSON File
- 4.Image Preprocessing Pillow(Python)

Working:

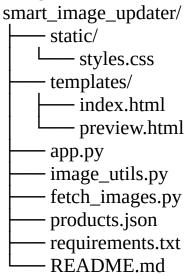
- 1. Homepage (HTML): Shows a list of products without images.
- 2. Search (JS → Flask): When you click "Search", it fetches mock image URLs for the product name.
- 3. Preview: Shows 2–3 images to choose from.
- 4. Select + Save: On selection, the backend:
 - Downloads the image
 - Resizes it to 500x500
 - Updates the product's image path in the products.json file

5. Reload: Product disappears from the "missing image" list.

Benefits of This Approach

- 1.Looks better with HTML/CSS (easy to style)
- 2.No database needed easy to understand and share.
- 3. Fully web-based and beginner-friendly.
- 4. Prepares you for future upgrades (e.g., adding cloud)

Project Structure:



Functional Overview (How It Works)

- 1. Frontend (HTML)
 - a)index.html Lists all products that don't have images.
 - b)Button: "Search Image" → opens product.json for that product.
- 2. Backend (Flask)
 - a)Loads product data from product.json

- b)Uses mock image search (e.g., placeholder.com or SerpAPI if needed)
- c)When user selects an image:
 - 1.Downloads it
 - 2.Resizes it to 500x500 using pillow.
 - 3. Saves it locally
 - 4.Updates the product.json in the new image path
- 3. Image Processing
 - a)image_utils.py : Makes all images square (centered and white-padded if needed)
- 4. Storage
 - a)All product info (name, code, image path) is stored in products.json
 - b)Saved images go inside /images.