

Functionalities of boxes are mentioned below by the number written on the box (PTO for diagram)

1. Upload
2. Status
3. ProcessImage
4. CompressImage
5. webHook

1. Upload

Validate and Store Request

- Checks if a CSV file is uploaded and validates the file type.
- Creates a new entry in the `requests` table with status **"PENDING"**.

Parse CSV File

- Reads the file and extracts product details (serial number, product name, input image URLs).
- Stores each product in the `products` table, linking it to the request.

Process Images

- Iterates over the extracted products and processes their input images.
- Generates output image URLs and updates the `products` table.

Trigger Webhook (After Processing)

- Updates request status to **"COMPLETED"** once all images are processed.
- Sends a webhook notification with the request ID and completion status.

2. Status

Fetch Request Status

- Retrieves the processing status (PENDING or COMPLETED) of a CSV upload request based on `requestId`.

Return Processed Data

- If processing is completed, it provides the processed product details along with their output image URLs.

3. ProcessImage

Validates Image URLs

- Iterates through `inputImageUrls` and skips invalid URLs. Sends `imageUrl` to `compressImage` function and gets a `imageBuffer` in return.

Processes Each Image

- (Currently commented) Intended to **compress images** for optimization.

Uploads to Storage

- (Currently commented) Once blob storage is available, compressed images will be uploaded.

4. CompressImage

Fetches Image Data

- Downloads the image from the given URL as a binary buffer using Axios.

Compresses Image

- Uses Sharp to convert the image to JPEG format with **50% quality** and returns the compressed buffer.

5. WebHook

Sending Notification

- Triggers a webhook notification upon completion of CSV processing, sending the request ID and status update.

