**Pipeline for Find Best-Matching Image from Prompt**

**Step 1: Input**

* **User Input**: Natural language description (e.g., "Elon Musk standing in a grass field holding an umbrella with a circus in the background")

**Step 2: Image Search** **Text → Image Search APIs**

* Query multiple sources in parallel:
  + Perplexity.ai
  + Lexica.art / Krea.ai (Optional)

**Output**: List of image URLs (per source)

**Step 3: Image Collection** **Downloader Module for Storing (Optional)**

* Download images from URLs
* Convert to consistent format (e.g., RGB JPEG)
* Optionally deduplicate by hashing

**Output**: Local or in-memory image objects

**Step 4: Image Analysis** **Semantic Matching Module**

* Use OpenAI CLIP or BLIP-2
* Encode original prompt to text embedding
* Encode each image to image embedding
* Calculate cosine similarity between prompt and image

**Output**: List of (image, score) tuples

**Step 5: Ranking & Filtering** **Scoring Module**

* Rank images by similarity score
* Optional filters:
  + Resolution
  + Source trust

**Output**: Top-K sorted results

**Step 6: Output Display** **Frontend**

* Show top results with:
  + Image preview
  + Source URL
  + Score
  + Optional caption (from BLIP-2 or ChatGPT-4o)
* Allow download or save to workspace