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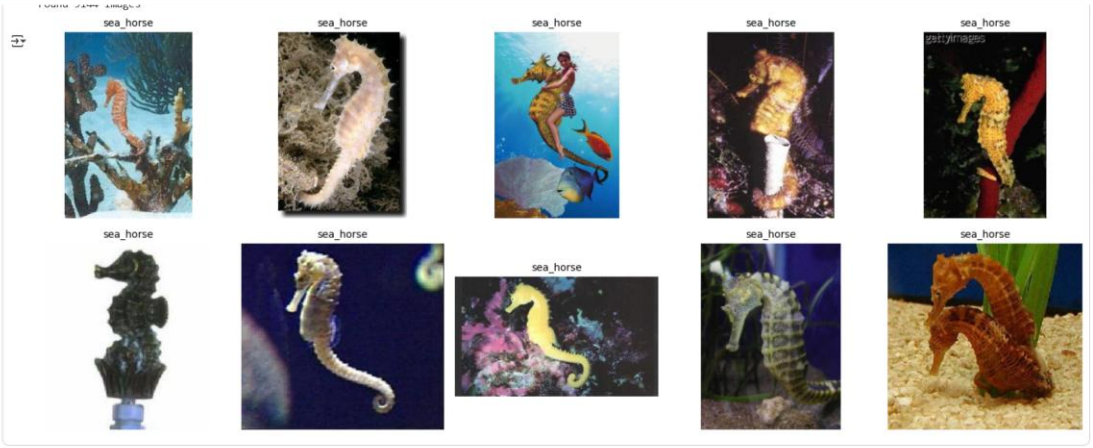
Connect T4



Initialize CLIP Model

```
# @title **Initialize CLIP Model**
# CLIP (Contrastive Language-Image Pre-training) is a neural network trained on a variety of image-text pairs
# It can understand images in a semantic way, making it perfect for image similarity tasks
```

Variables Terminal

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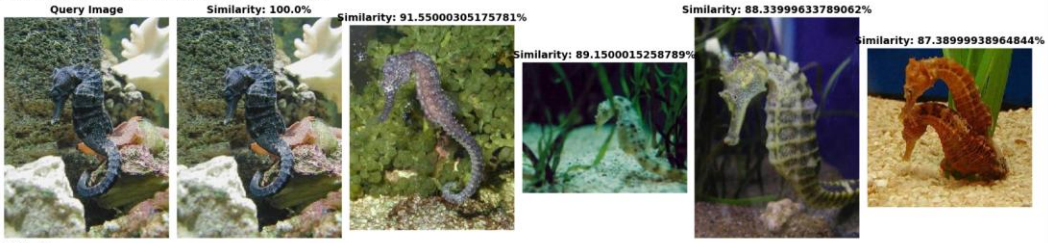
Connect T4

```
        for i, sim in enumerate(similarities):
            print(f"Image {i+1}: {sim}%")
    else:
        print("No similar images found or search function not working properly.")
else:
    print("No valid image paths found. Please check your dataset.")
```

```
Query image: data/caltech-101/sea_horse/image_0056.jpg
```




```
Similarity scores:
Image 1: 100.0%
Image 2: 91.55000305175781%
Image 3: 89.150001525878 9%
Image 4: 88.339996337890 62%
Image 5: 87.389999389648 44%
```

Upload and Test with Custom Images (Robust Version)

```
# @title **Upload and Test with Custom Images (Robust Version)**
# This version has better error handling and debugging
```

Variables Terminal

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Connect T4

```
            else:
                print("No similar images found or search returned empty results.")

    except Exception as e:
        print(f"Error during upload and search: {e}")
        print("Please make sure all previous cells have been executed successfully.")

upload_and_search_robust()
```

```
Choose files  No file chosen    Upload widget is only available when the cell has been executed in the current browser session. Please rerun this cell to enable.
Saving soccerball.webp to soccerball.webp
Processing soccerball.webp...
```


```
Similarity scores:
Image 1: 94.55000305175781%
Image 2: 93.83000183105469%
Image 3: 93.7699966430664%
Image 4: 92.94000244140625%
Image 5: 92.5199966430664%
```

Save the FAISS Index and Image Paths

```
# @title **Save the FAISS Index and Image Paths**
# Saving the index and paths allows you to reload the system without recomputing all embeddings
```

Variables Terminal