Zocket Machine Learning (Computer Vision)

Generative AI for Visuals

- I created images using Stable Diffusion
- You can see the samples below

```
-   #Generate Image
-   for name in names:
-   prompts = [f"{name}"]
-   images = pipeline.generate(prompts)
-   images[0].save(f'./ai generated/{name}.jpg')
```



Product Recognition Filter

I am using the YOLO base model *and if we want our model to detect other categories we can train it with other data, for now I am just using few categories from the pretrained set*

The base model has been trained for objects such as bottle, suitcase etc

Exclusion of Non-Relevant Images

We will first define a set of products, we want to check if it exist in the image.

If they exist, we will add them to approved folder else, we will move it to rejected folder.

```
#Filter Objects
    results = model(f'{name}.jpg')

    if results:
        for r in results:
            for c in r.boxes.cls:
                print(classes[int(c)])
                if classes[int(c)] in set_of_products:
                    print('Product available')
                    shutil.move(f'{name}.jpg', f'./approved/{name}.jpg')
                else:
                    print('Product rejected')
                    if os.path.exists(f'{name}.jpg'):
                        shutil.move(f'{name}.jpg', f'./rejected/{name}.jpg')
    else:
        print('No detections')
```