From Model To Production

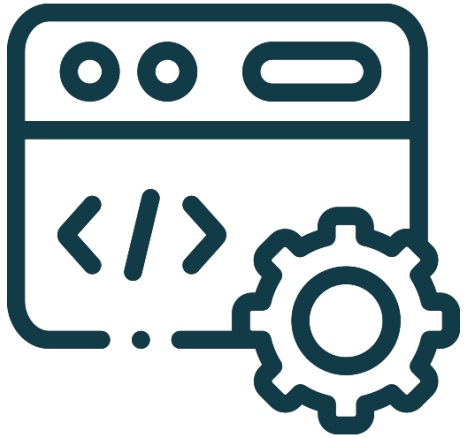
A presentation about image classification for a refund department

Link to Github: https://github.com/sanax-997/project_from_model_to_production.git

Project Overview

Fast Growing Business

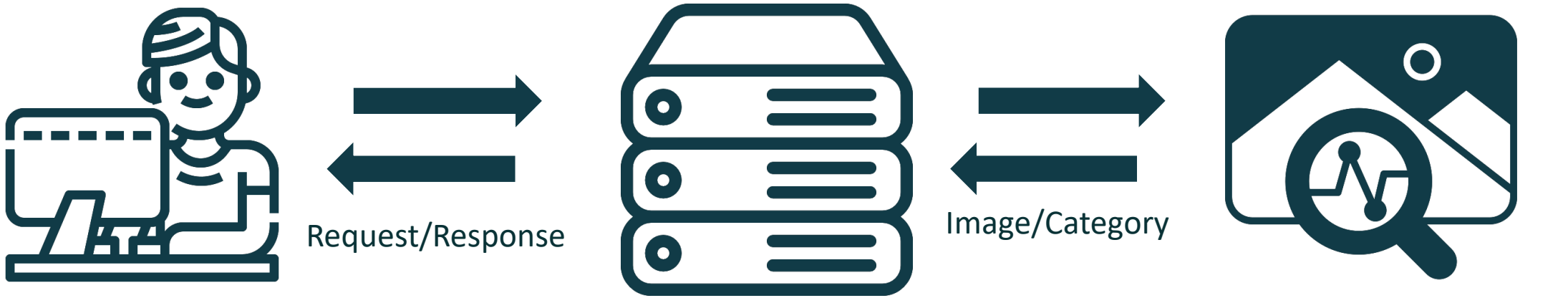
Image Classification



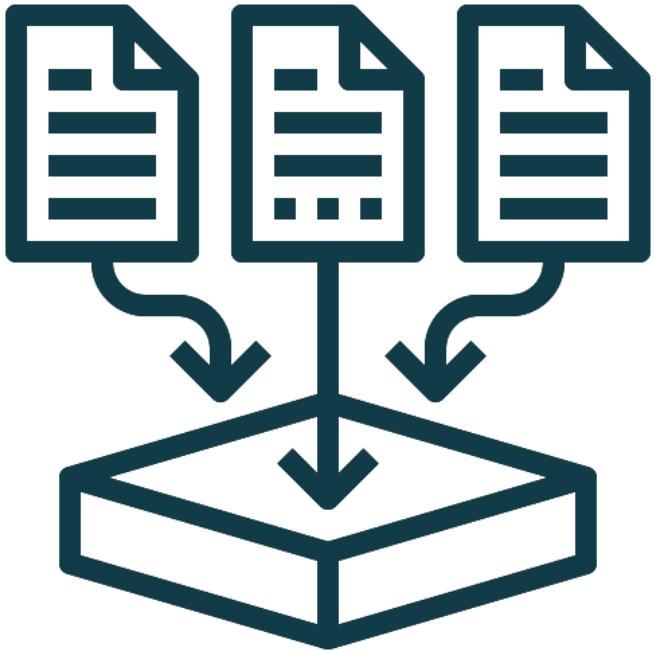
Software Solution

Table of Contents

System Overview

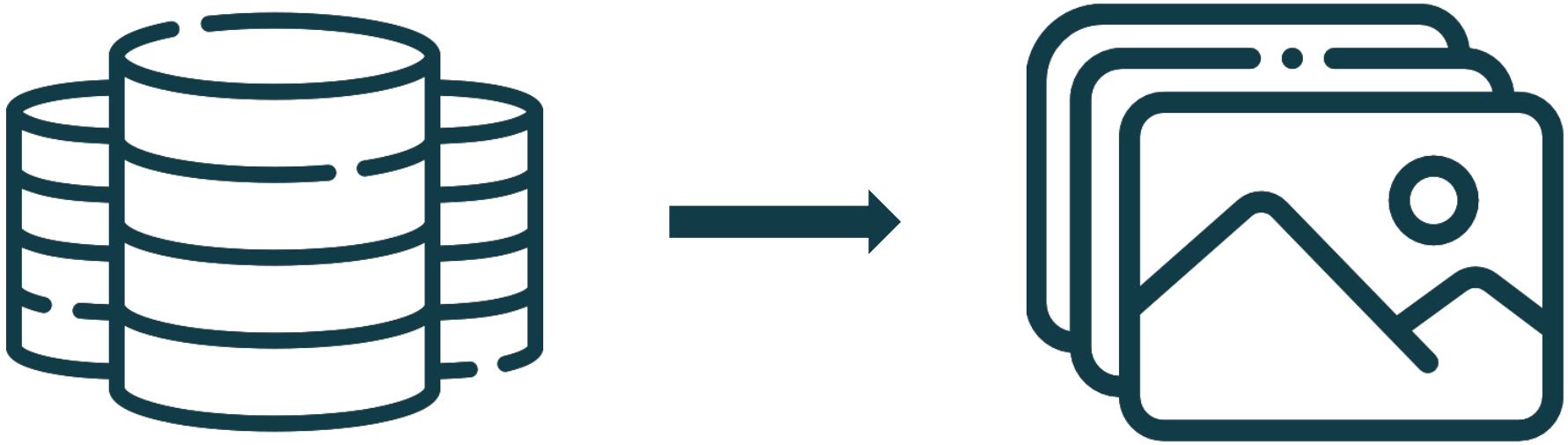


Machine Learning Model



Type of Machine Learning Model

Training Data



Raw Data

Image Data

The Training Process

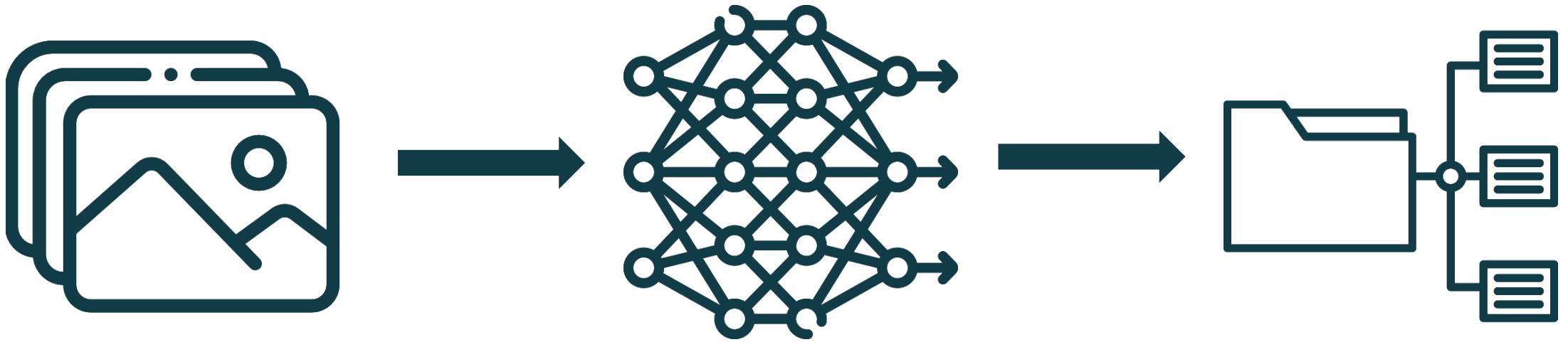


Image Data

Deep Learning

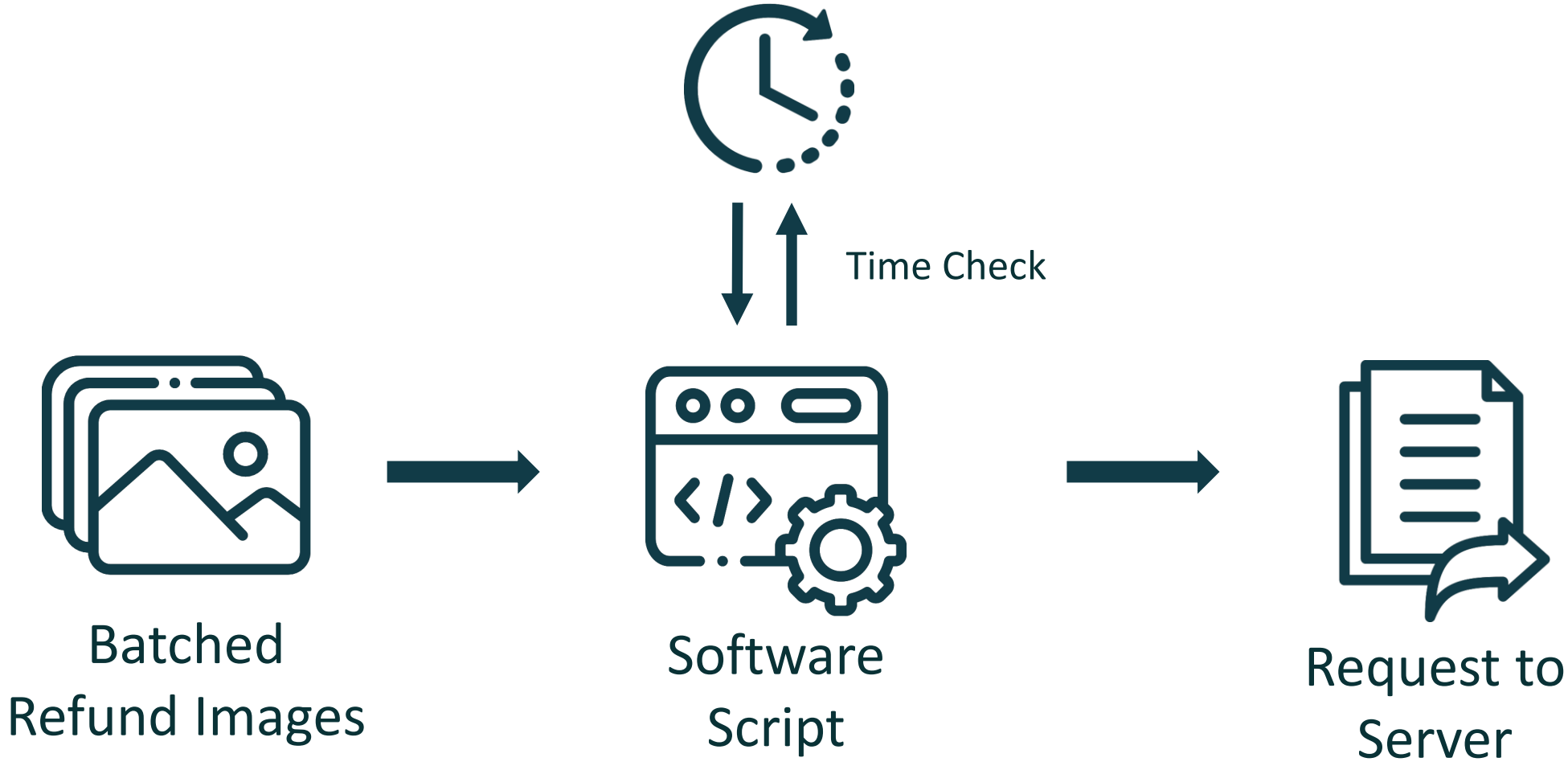
Classification

Web Application Overview

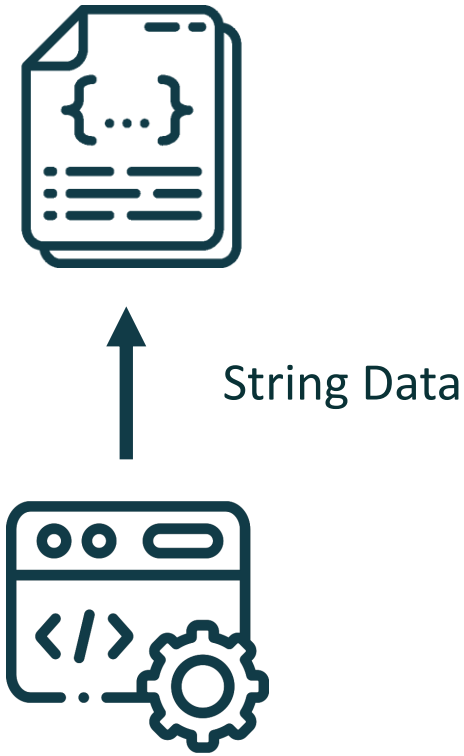
Client

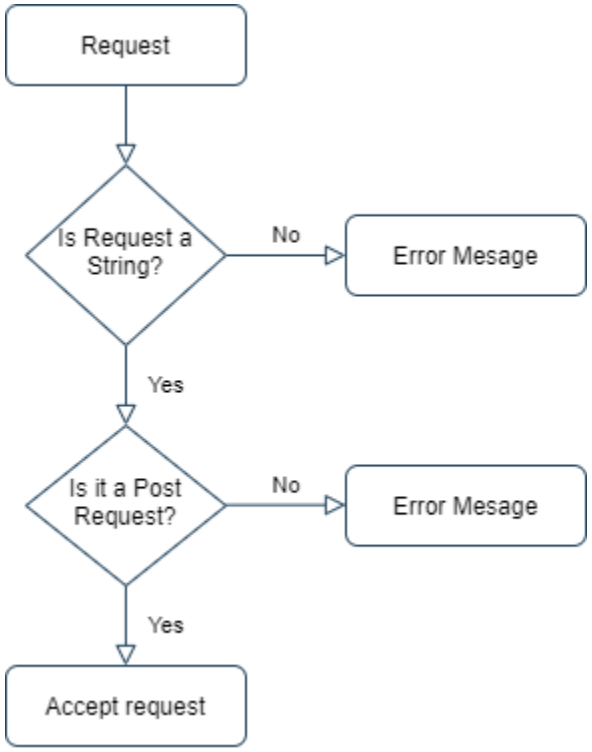
Server

Client Overview

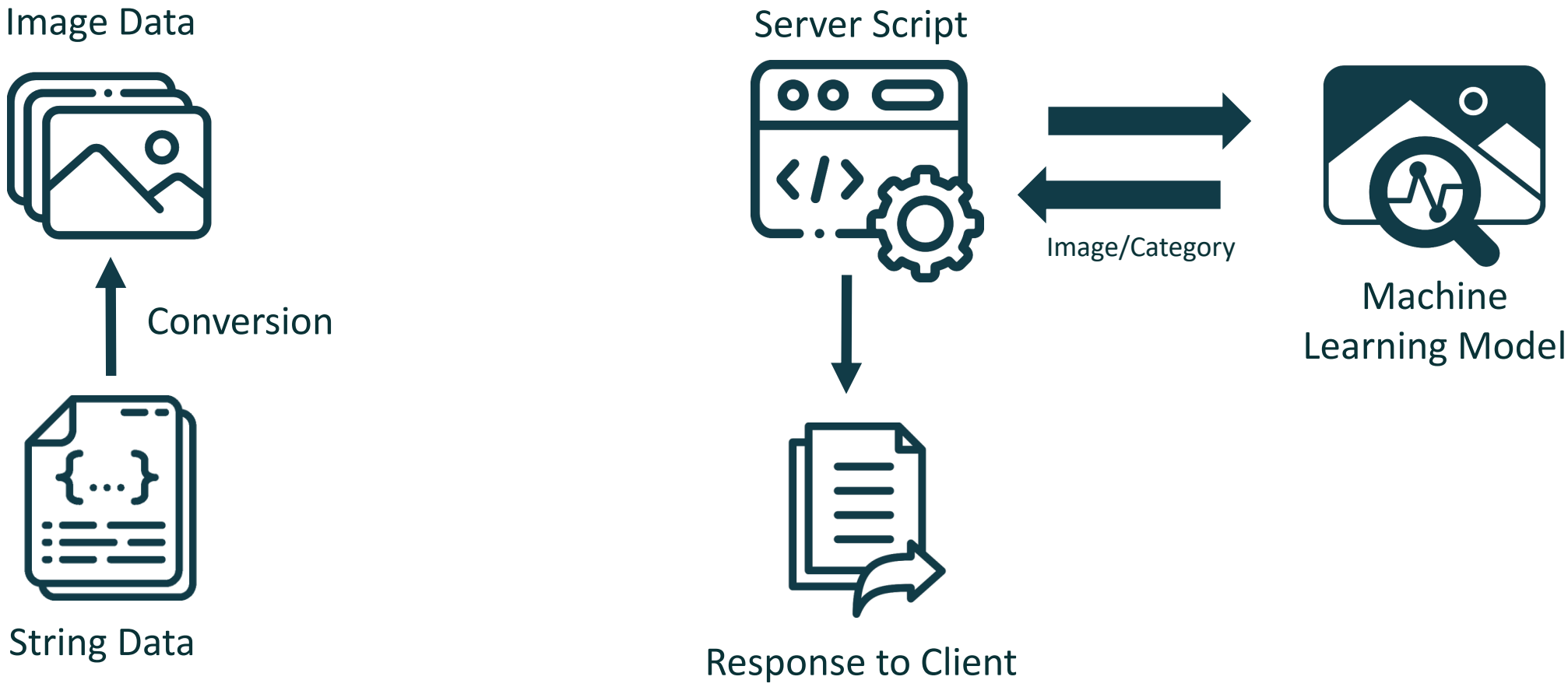


Client-to-Server Communication





Server Overview



Server-to-Client Communication

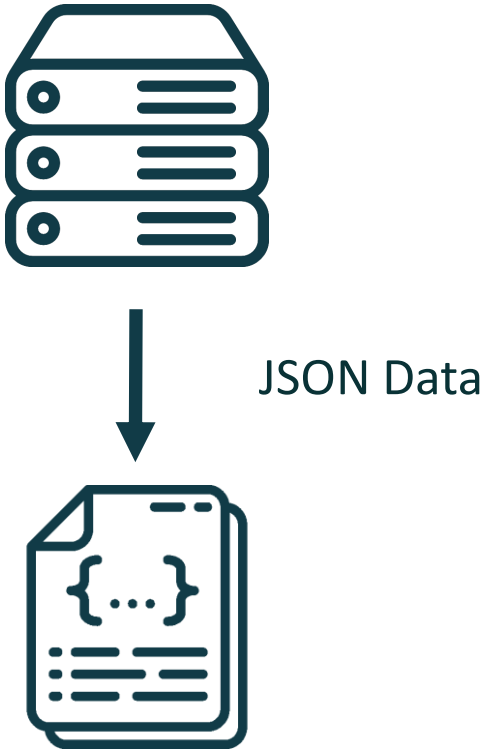
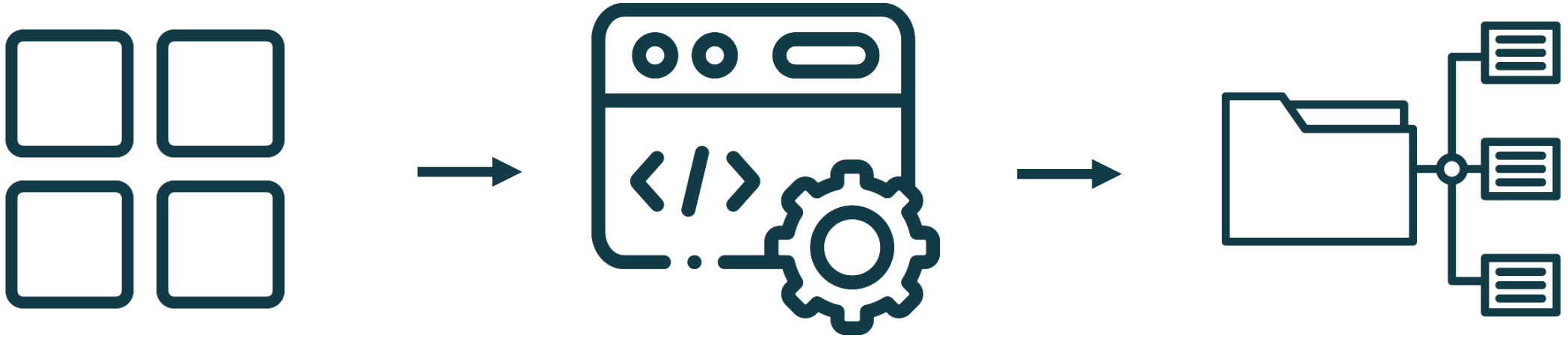


Image Sorting



Incoming Categories

Sorting Script

Sorting of Files

Demonstration – Server Setup

1. Activate the shell →

```
pipenv shell
```

2. Navigate to directory →

```
cd classifier
```

3. Launch Server →

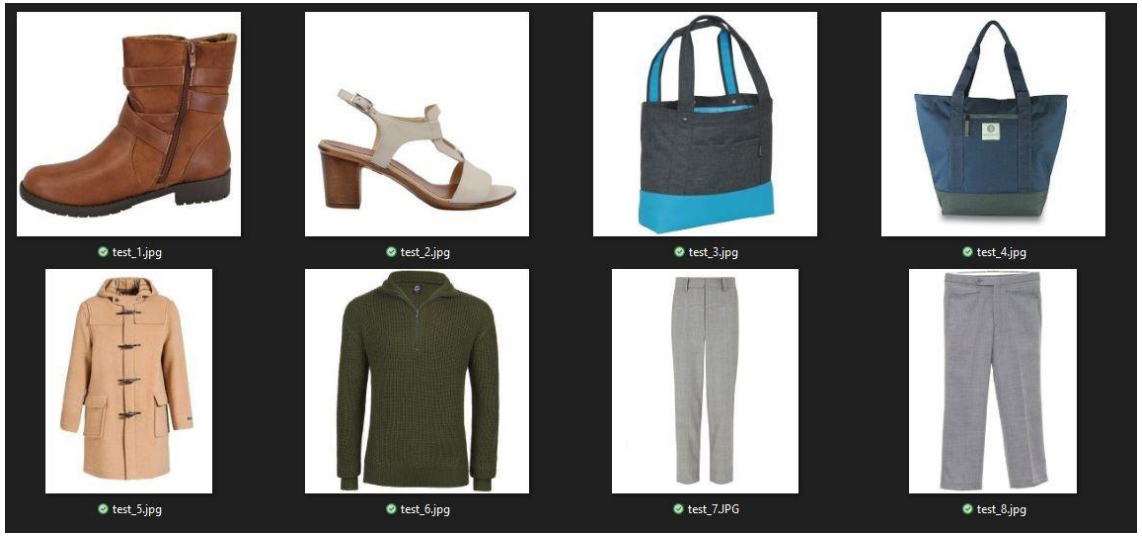
```
\classifier> py manage.py runserver
```

4. Successful Server Launch →

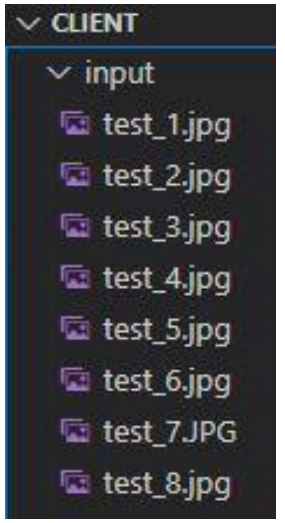
```
System check identified no issues (0 silenced).
March 31, 2023 - 16:59:16
Django version 4.1.7, using settings 'classifier.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

Username: admin Password: 1234 Email:admin@admin.at

Demonstration – Test Images



Test Image Folder



Input Folder

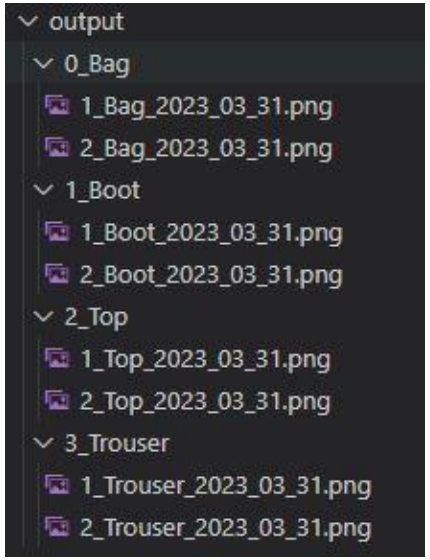
Demonstration – Client

1. Activate the shell → `pipenv shell`
2. Launch Client Script → `py main.py`
3. Wait for Time function →
4. Send Images to Server →

```
1/1 [==============================] - 0s 257ms/step
[31/Mar/2023 17:11:05] "POST /api/ HTTP/1.1" 200 1
```

Demonstration – Results

Returned Categories



Output Folder

From Model To Production

A presentation about image classification for a refund department

Link to Github: https://github.com/sanax-997/project_from_model_to_production.git

References

- Team, Keras (2023): Keras documentation: VGG16 and VGG19. Online verfügbar unter https://keras.io/api/applications/vgg/, zuletzt aktualisiert am 06.04.2023, zuletzt geprüft am 11.04.2023
- Deep Learning (2017). Cambridge, Mass.: MIT Press Ltd (Adaptive Computation and Machine Learning Series).