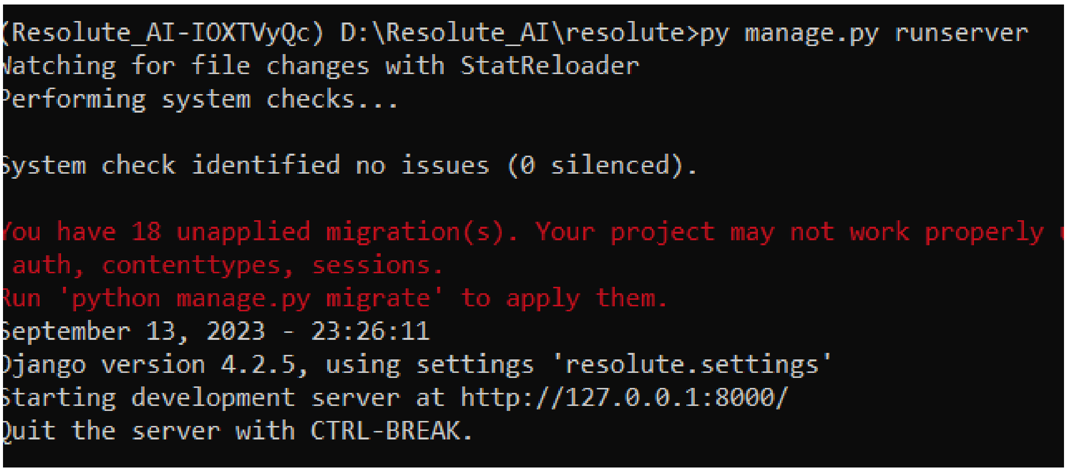
Deploying a Django application on AWS

Creating a Django Application:

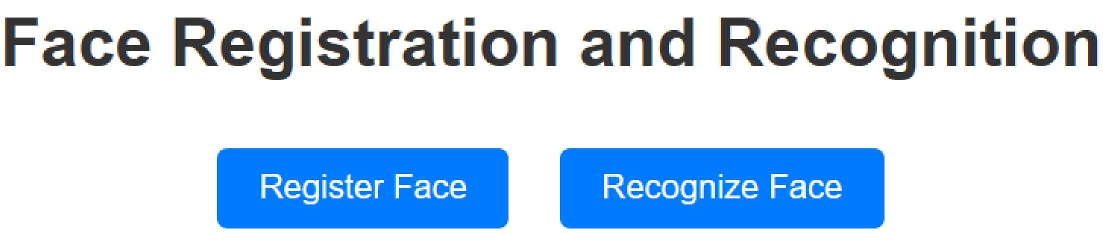
- Install Django: pip install django
- Install deepface: pip install deepface
- Install opencv-python: pip install opencv-python
- Create project: django-admin startproject resolute
- Change directory: cd resolute
- Create app: py manage.py startapp main
- Configure settings.py, urls.py and views.py
- Run server: py manage.py runserver



```
(Resolute_AI-IOXTVyQc) D:\Resolute_AI\resolute>py manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly
 auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
September 13, 2023 - 23:26:11
Django version 4.2.5, using settings 'resolute.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```



Face Registration and Recognition

Containerizing:

- Create dockerfile in the project repository
- Build: docker build -t resolute .
- Run: docker run resolute
- Issues: opencv-python has issues with docker which makes this application not possible to run on docker. There are no official opencv docker images to build from, which makes the issue even more unapproachable.

```
FROM python

ENV PYTHONUNBUFFERED 1

WORKDIR /app

COPY . /app/

COPY ./requirements.txt /app/requirements.txt

RUN apt-get update && apt-get install ffmpeg libsm6 libxext6  -y

RUN pip install -r requirements.txt

EXPOSE 8000

ENTRYPOINT ["python", "manage.py"]
CMD ["runserver", "0.0.0.0:8000"]
```

AWS deployment:

- Create an EC2 instance in AWS console with Amazon Linux as OS and port 80 and 22 open in the security group
- Port 80: for HTTP requests
- Port 22: for SSH connection
- Upload project in an S3 bucket
- Copy from bucket to EC2 instance: aws s3 cp /resolute .
- Install pip: sudo yum install python-pip

- Install django: pip install django
- Install opencv-python: pip install opencv-python
- Install deepface: pip install deepface
- Run server: py manage.py runserver