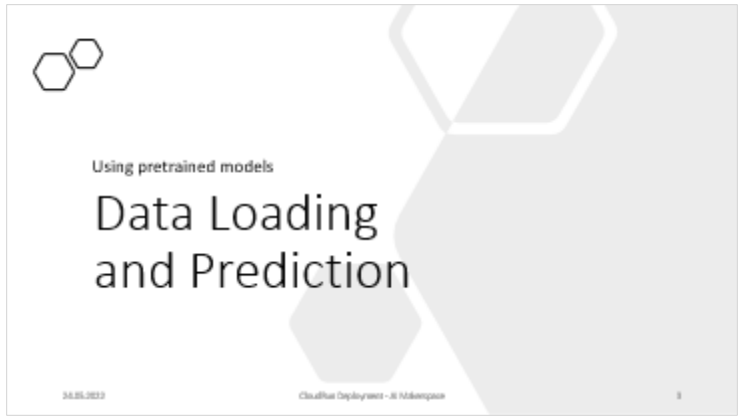
CloudRun Deployment

AI Makerspace

Contents


Using pretrained models
Data Loading and Prediction


Using Flask
Creating the Endpoint

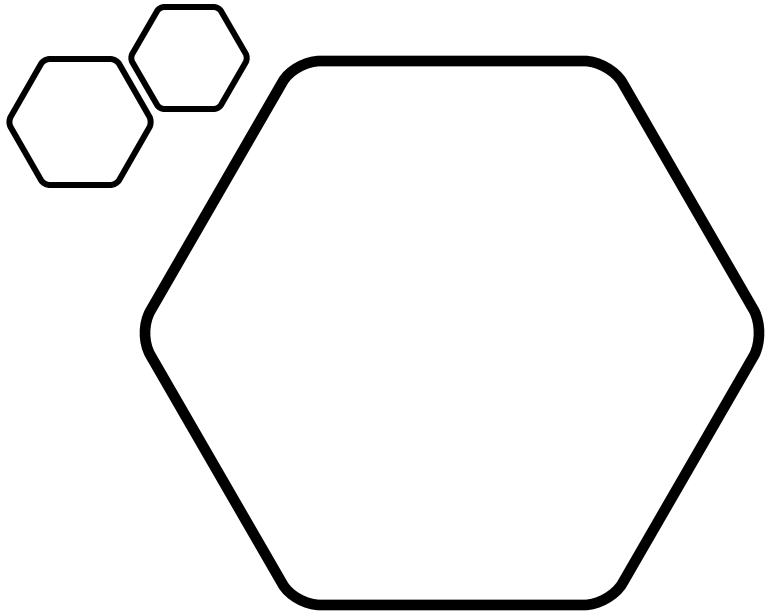

Deploying to CloudRun


Small Task

Using pretrained models

Data Loading and Prediction

Preprocessing



- Encoding
- Normalizing/Standardizing
- Transforming
- Resizing
- Converting
- …

Testing

- Performing predictions
- Error handling

Using Flask

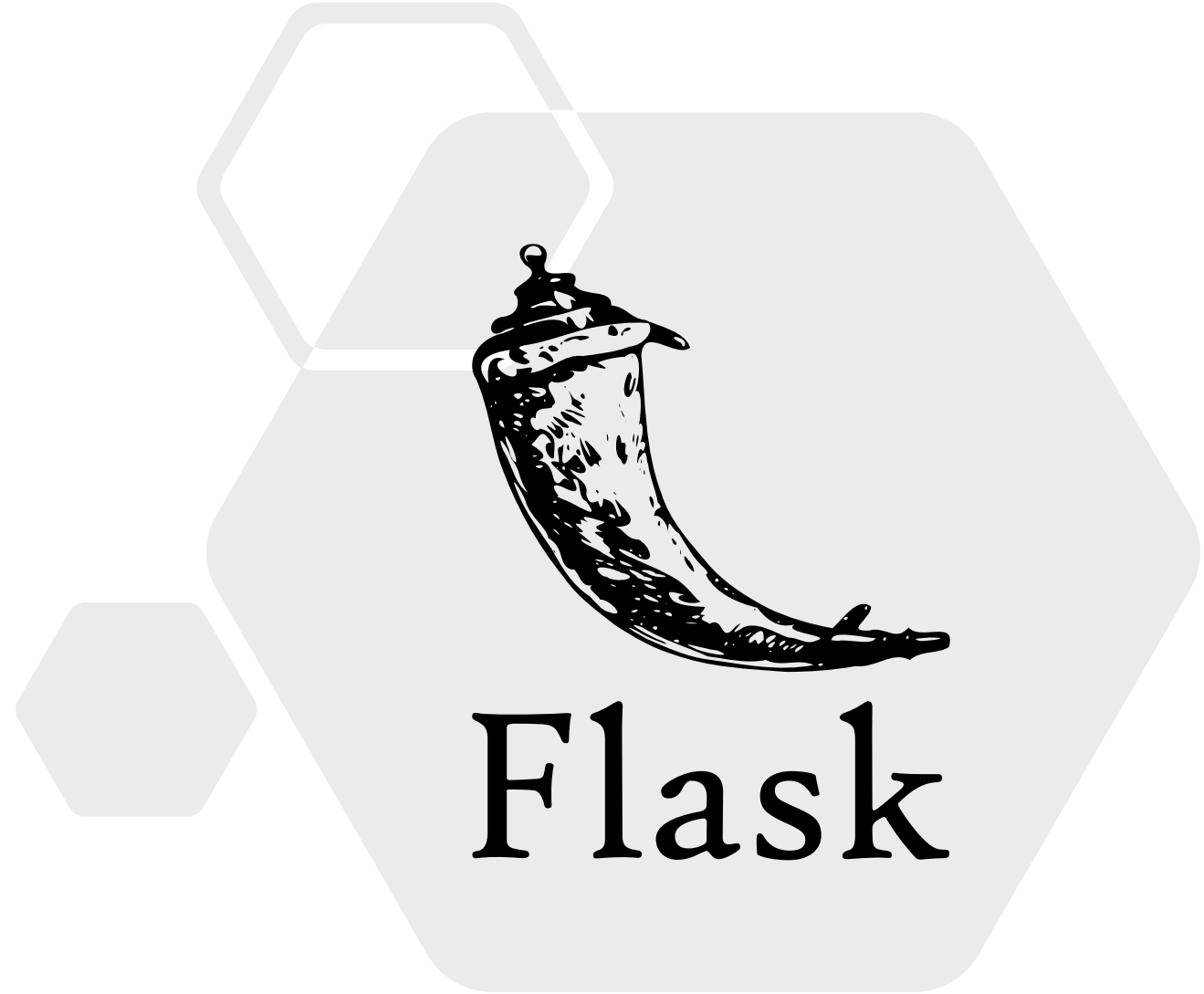
Creating the Endpoint

Model

- Install requirements
- Serve it in a function/class
- Test the function/class

API/Endpoint

- Create the appropriate endpoint (GET/POST)
- Check how data is acquired
- Perform the required preprocessing
- Check how data is returned



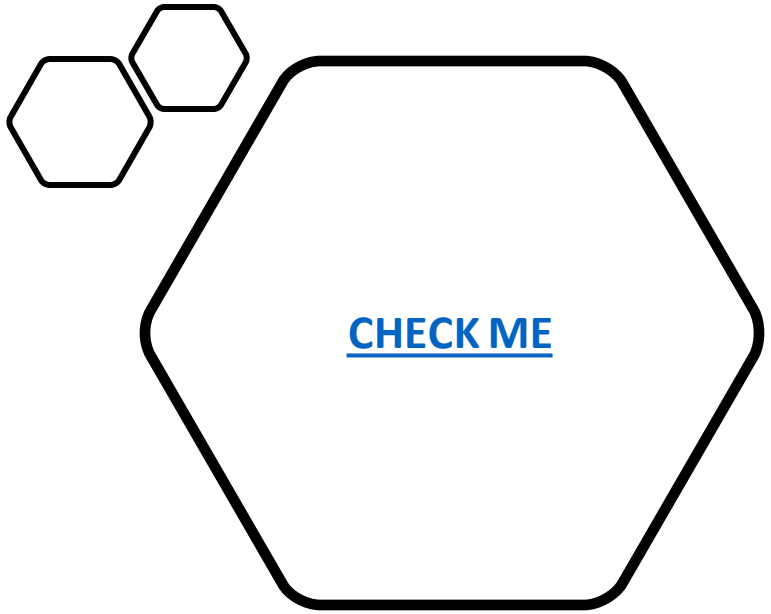
Endpoint Testing

- Use a virtual environment
- Using Postman
- Check for errors
- Take a breath

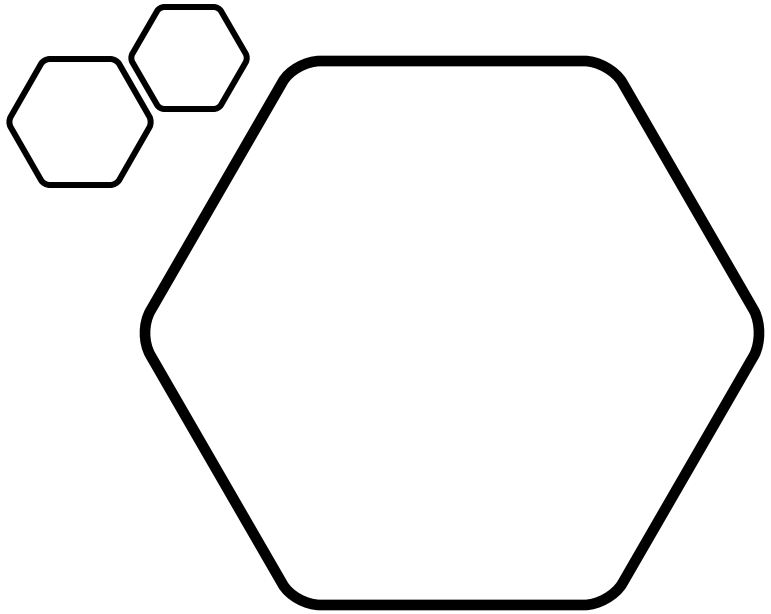
Deploying to CloudRun

Required files

- Application file (app.py)
- Model file (if needed)
- Requirements file
- Dockerfile



Steps of Deployment



- Push the repository to GitHub
- Open CloudRun
  - Create Service
  - Continuously deploy new versions from a source repo (Set up with Cloud Build)
  - Choose repository and branch to deploy
  - Choose Dockerfile as build type
  - Configure the settings and create

Small Task

Batch processing

- Clone the GitHub repo
- Open the BGRemoval directory
- If any of the RGBA values are missing in the request, make sure a default value of zero is added
- Create a new endpoint --> /batch
    - The endpoint accepts multiple files in the POST request
    - *Neglect the file if not PNG or JPG (Optional)*
    - Perform the background removal on all images
    - Save them locally
    - Return a JSON body containing {"Status": "x photos has been processed"}

THANK YOU