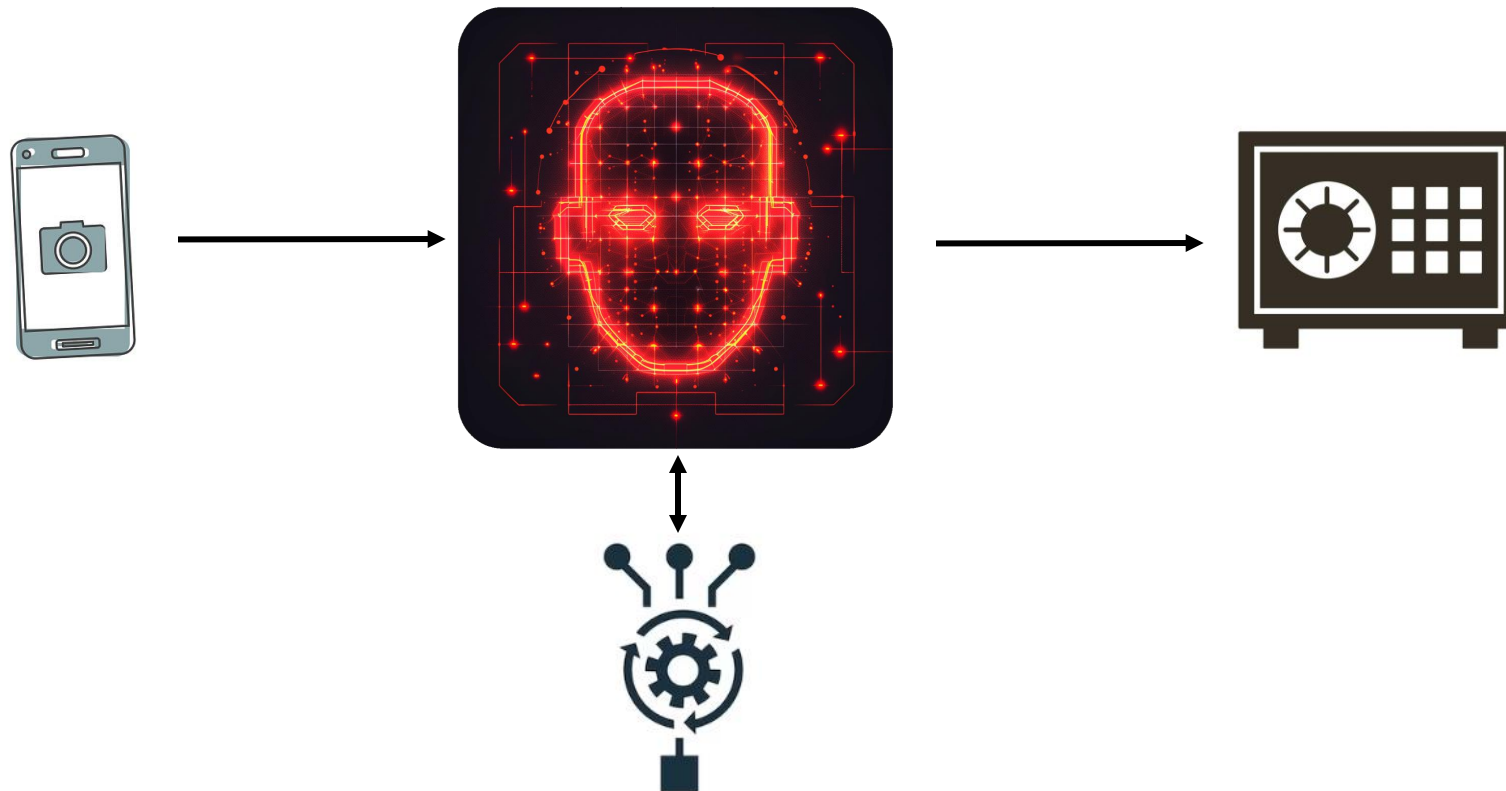


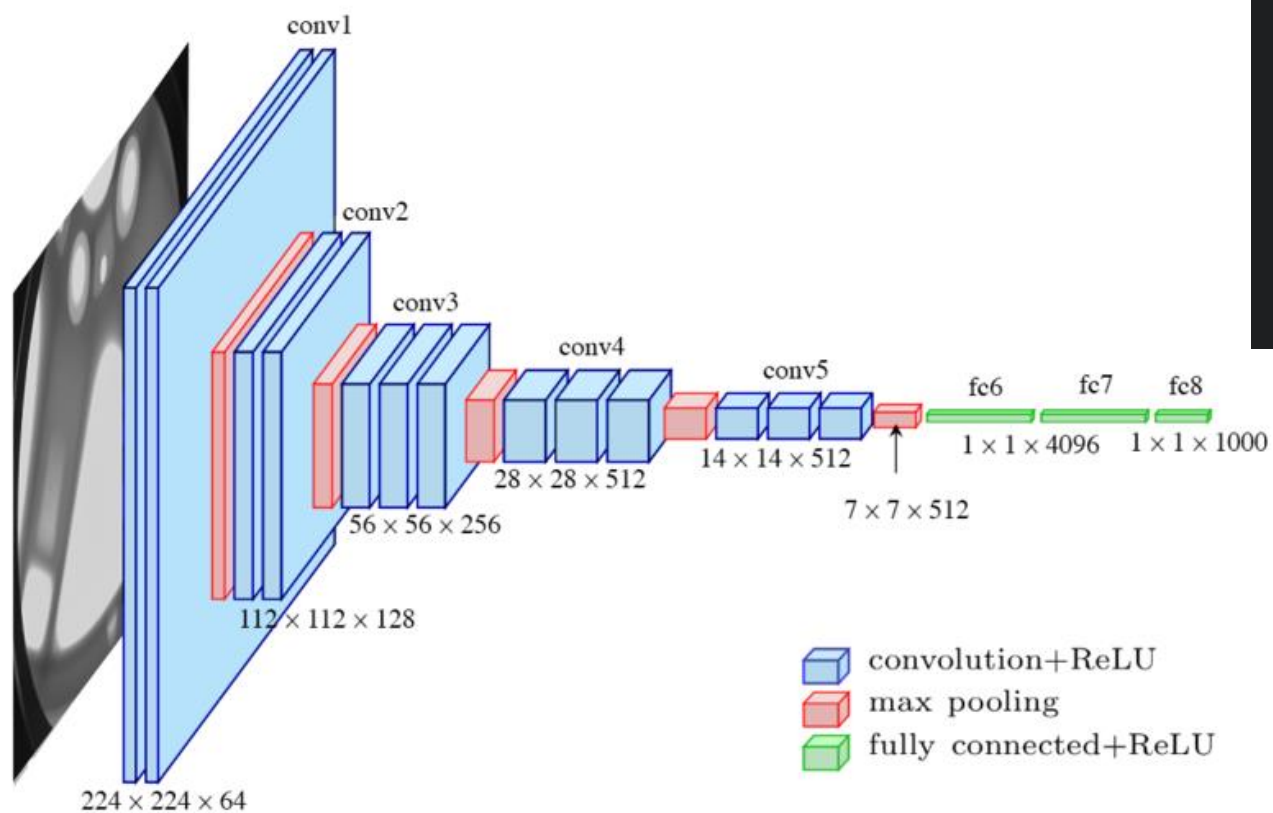
Vault Protect

Léo LE CORRE
Hugo KINDEL
Rêzan OZCAN
Séverine BENIER

Vault Protect



What is VGG-16?



```
base_model_output = Flatten()(base_model.output)

base_model_output = Dense(units=1024, activation='relu')(base_model_output)
base_model_output = BatchNormalization()(base_model_output)
base_model_output = Dropout(0.5)(base_model_output)

base_model_output = Dense(units=1024, activation='relu')(base_model_output)
base_model_output = BatchNormalization()(base_model_output)
base_model_output = Dropout(0.5)(base_model_output)

base_model_output = Dense(num_people, activation='softmax')(base_model_output)
```

Training with LFW Dataset then with DigiFace-1M

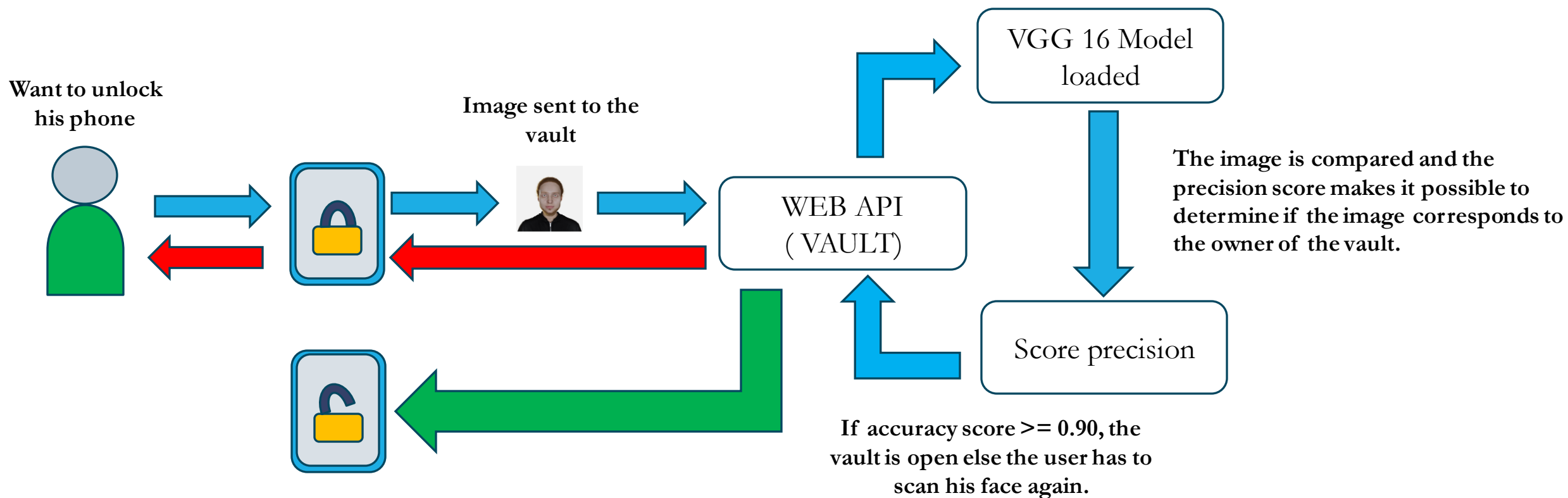
Training with LFW
Dataset :



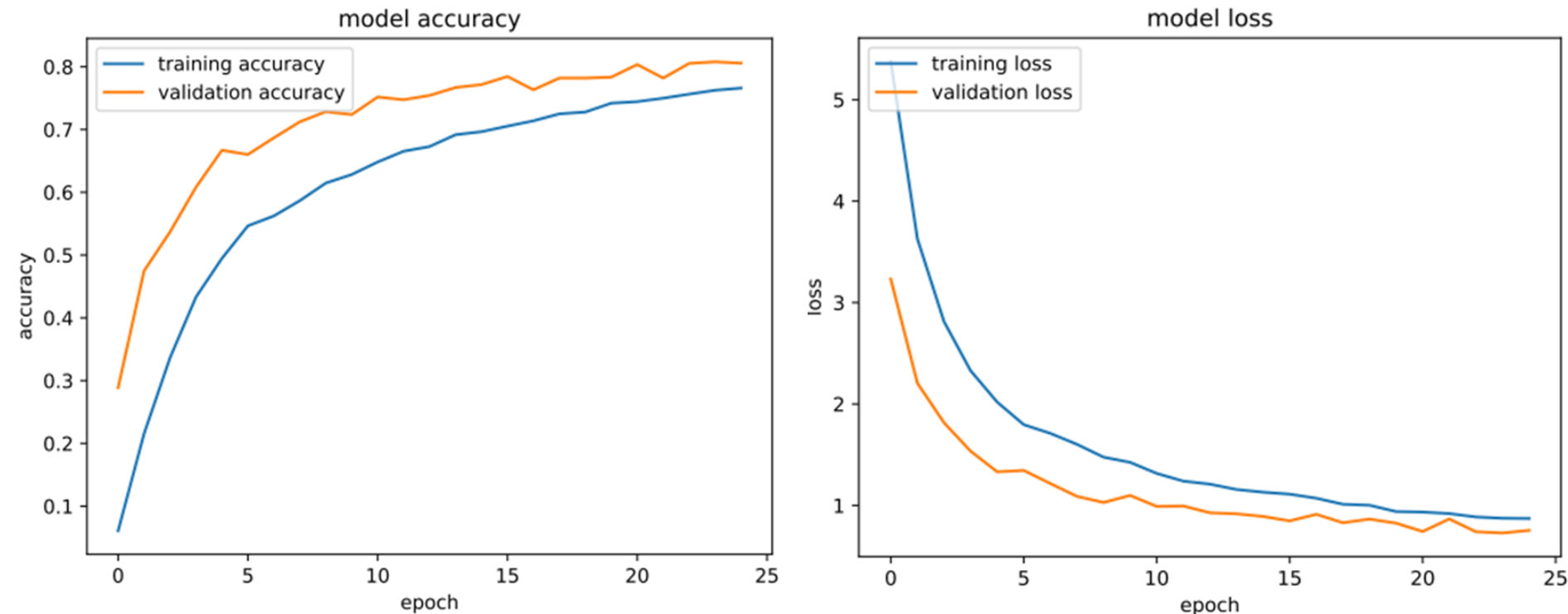
Training with
DigiFace-1M:



Architecture of proposed solution



Description the ML/DL Training and Inference Pipeline



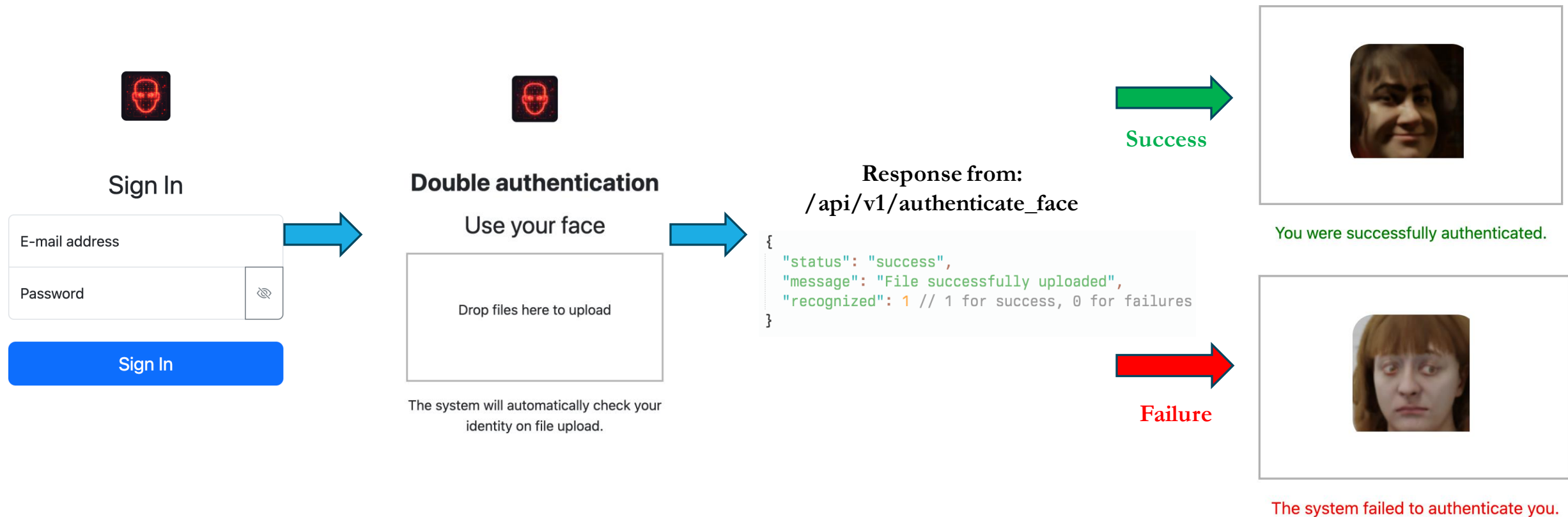
Epochs = 25, Images = 10, 000

Training on $25 \times 10,000 = 250,000$

Images analyzed = 250, 000

Performed in 45 minutes

Web Application and API



Conclusion

- While it works, it's unsecure and there are way better system for face recognition as a security measure.
- The web application and API could be improved by using a real database and refactoring the code to allow for better scaling in real world development.
- The model could be better if it was trained on all data from the dataset with further training and more added layers. There are good machines on cloud providers like AWS EC2 P4 that could be used for training (\$\$\$).
- Overall, we are proud of the model we produced using VGG-16 as a base model and DigiFace-1M as a dataset! While we do not have enough experience to obtain the best results, they have been impressive for us.