



# FaceCheck

## An AI Detection Tool

ANDY SHEN



# About Me

Hi! I'm Andy



**Data Scientist**

**Consultant**

Developer, .NET, Azure

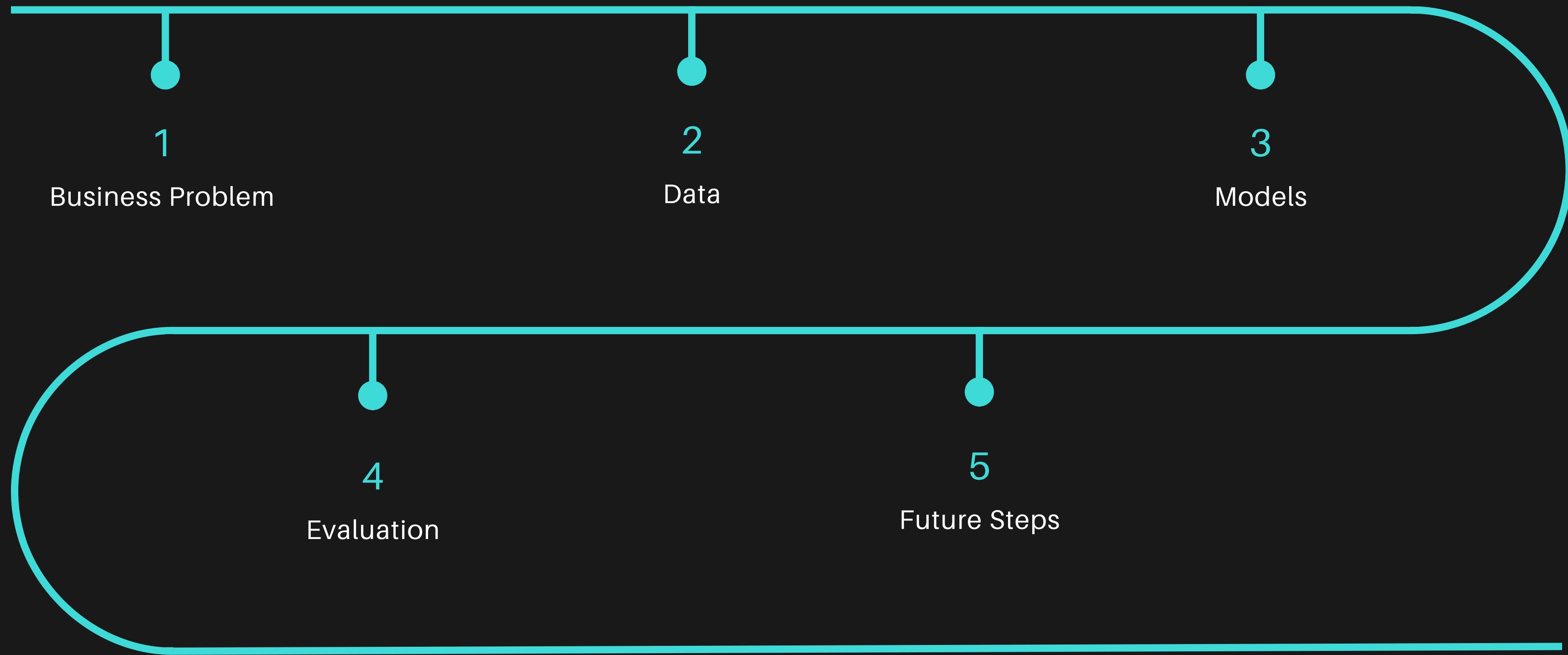
**Hobbyist**

Fitness, Gaming, Tech

[github.com/ashendy](https://github.com/ashendy)



# AGENDA





I-TEAM  
CONSUMER



# All Dating DANGERS

 I-TEAM CONSUMER

► Jason Knowles | ABC 7 EYEWITNESS NEWS



# **MANIPULATION**

Impersonation, Scams

# **FRAUD**

Identity Theft

# **MISINFORMATION**

Fake news

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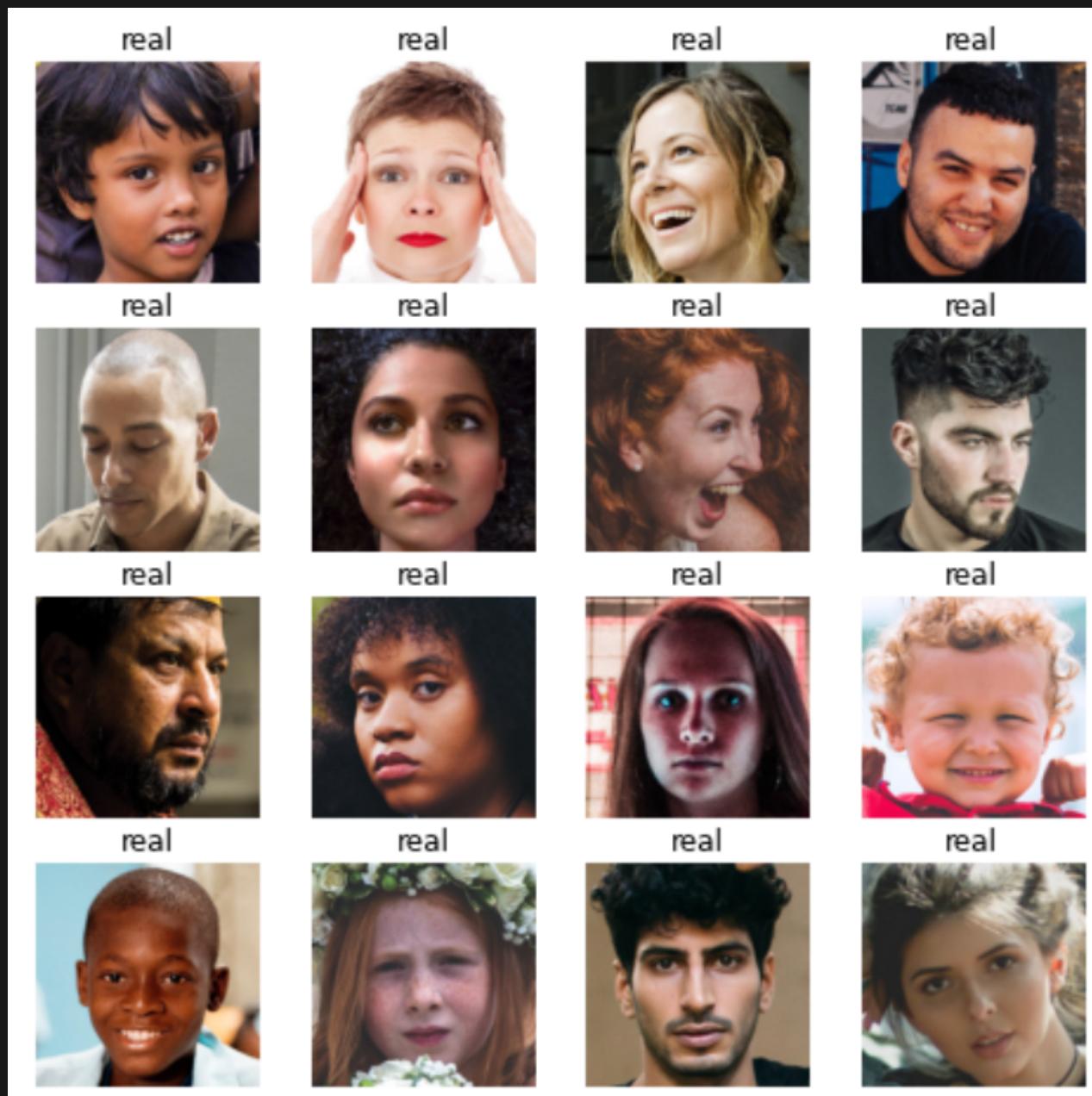
# **FACECHECK**

Equipping people to detect fake pictures



# DATA

- 1000 Real Photos
- 1000 Fake



# LIMITATIONS

- High Variance
- Skin tone, angle, accessories, facial expression



# Models



1

Baseline:  
Neural Net



2

10 Layer Neural Net



3

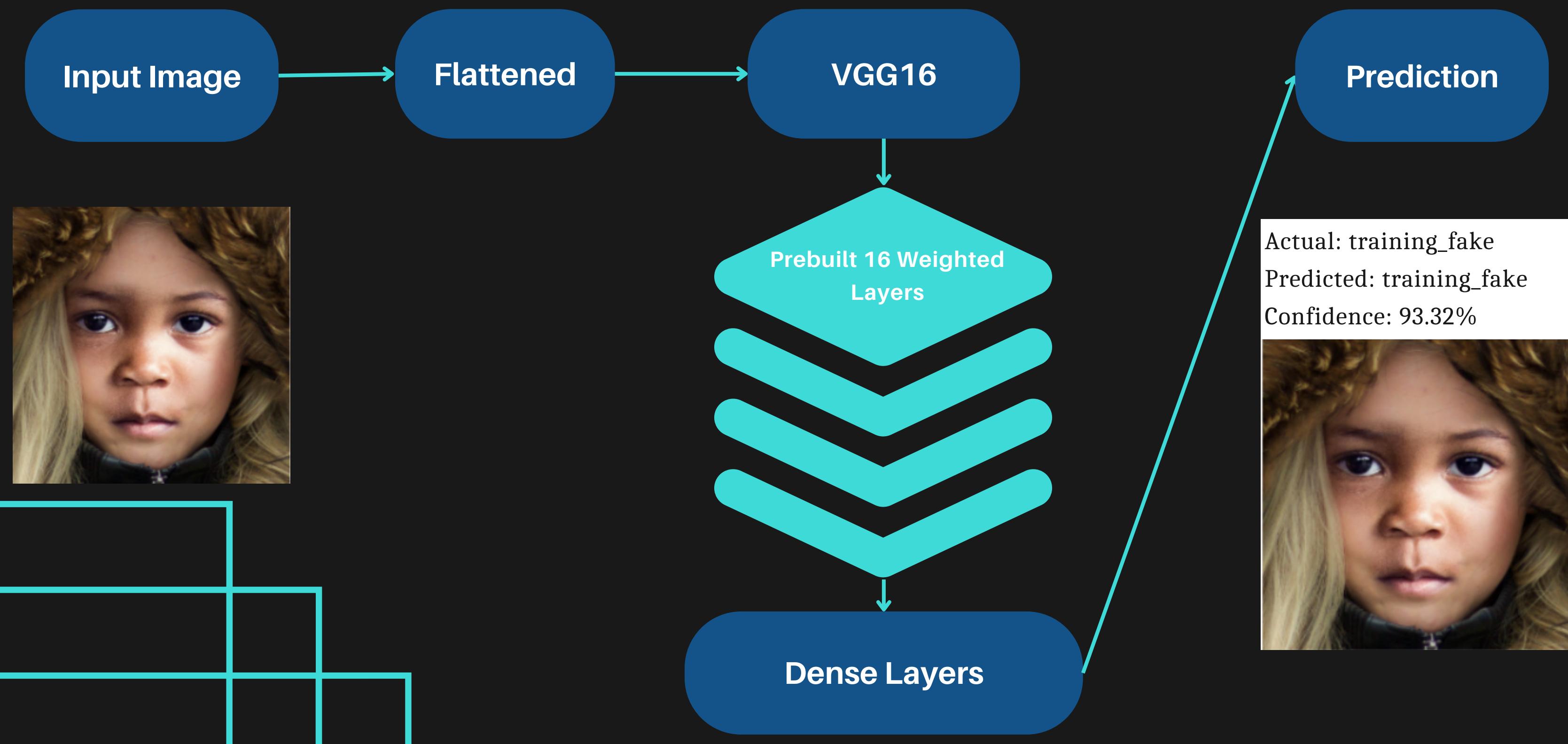
MobileNetv2



4

VGG16

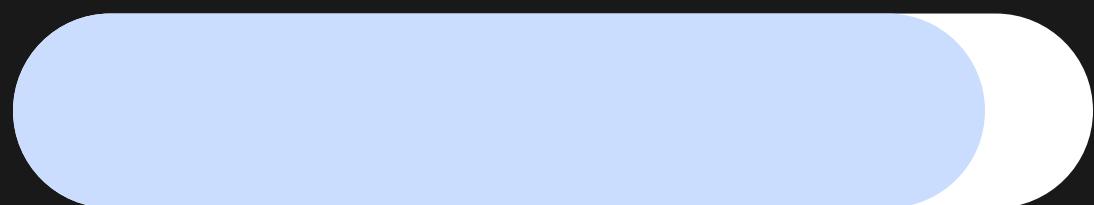
# Model Architecture



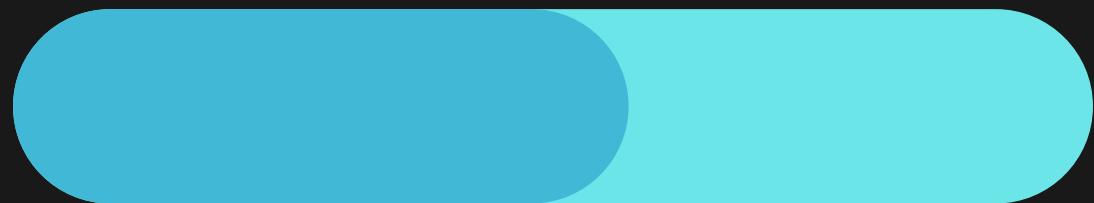
# Evaluation

## ACCURACY

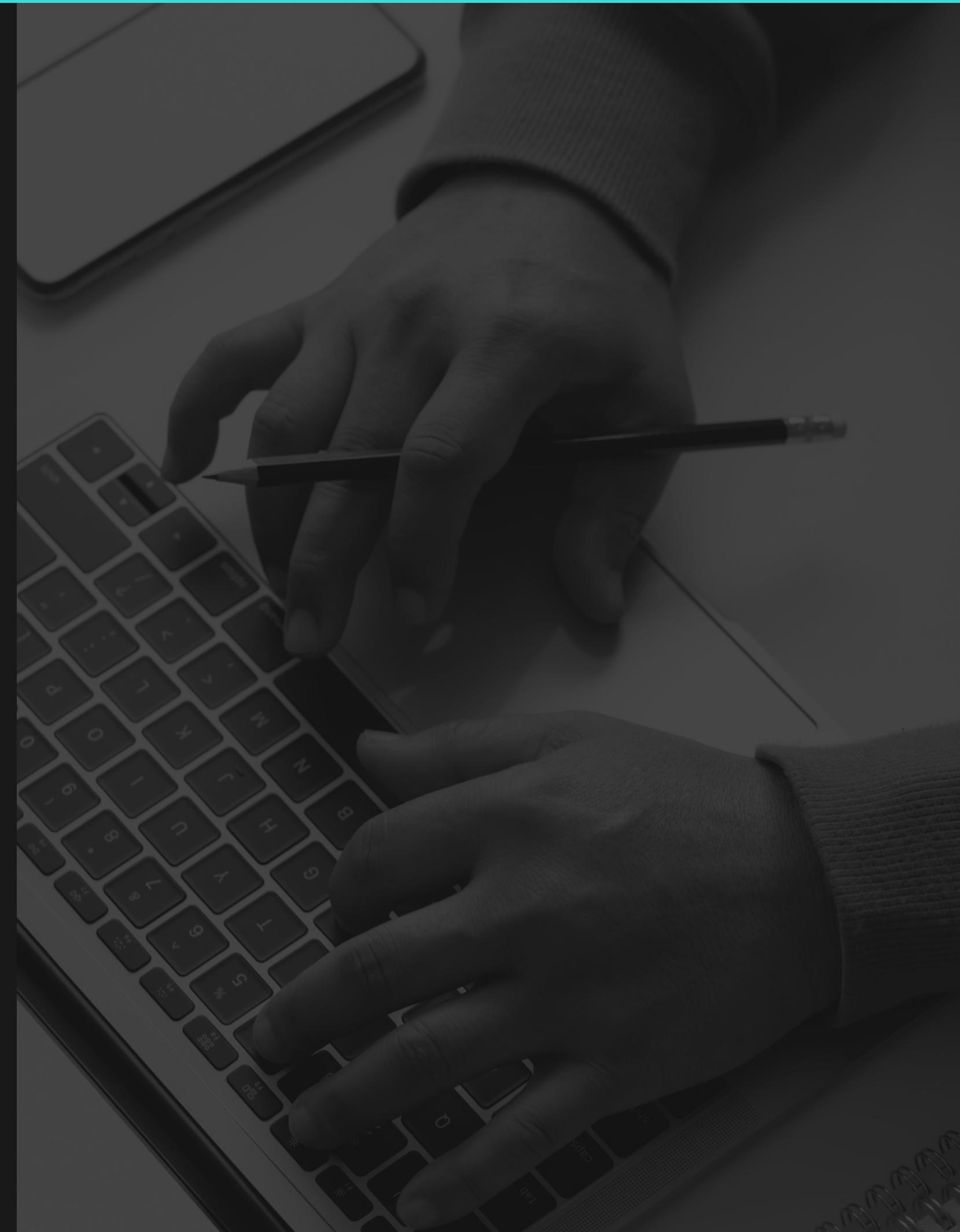
VGG16 Model



Training: 90%

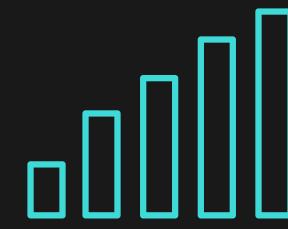


Test: 57%





# Future Steps



## INCREASE DATA

More is always better

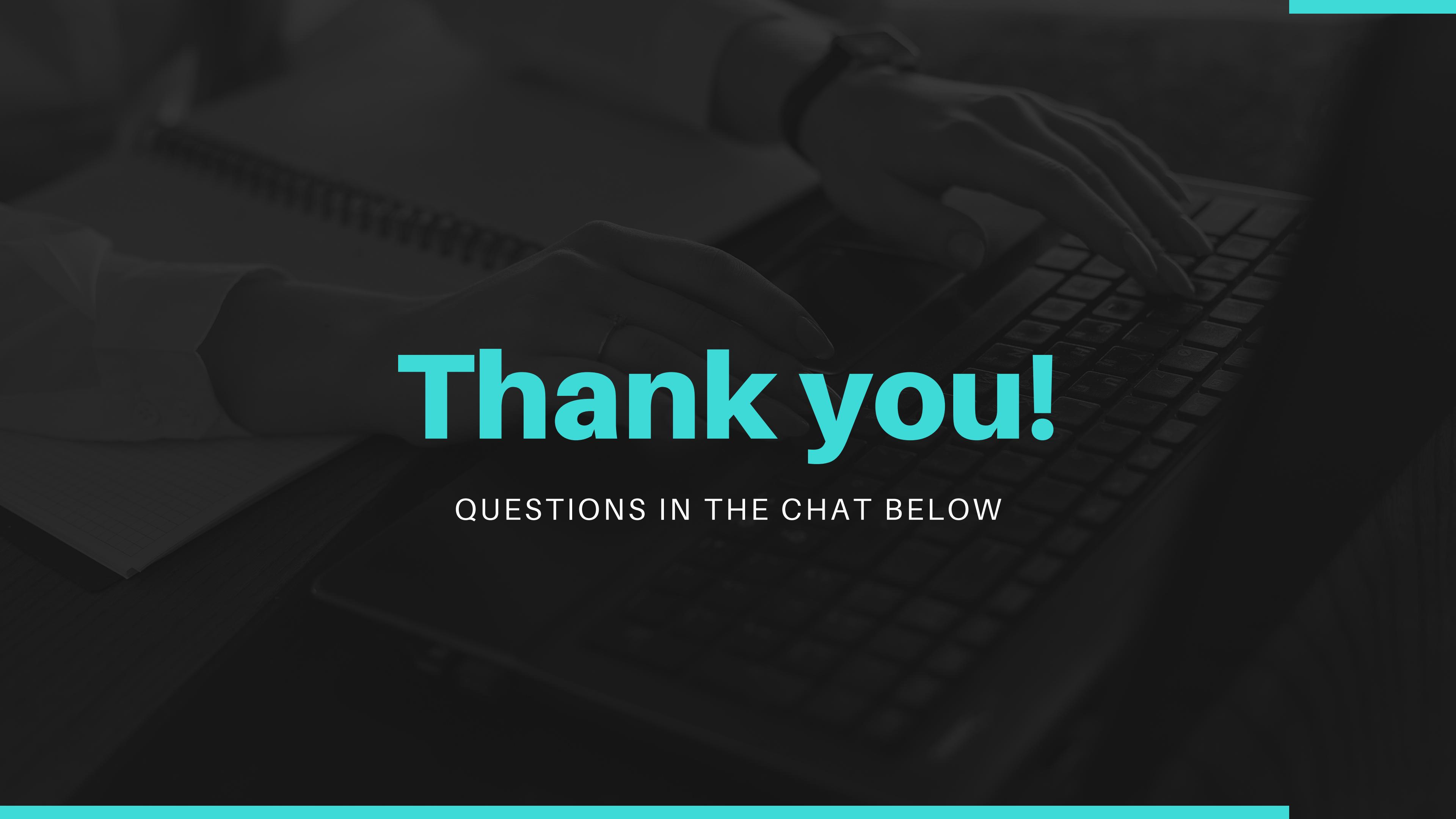


## TUNE MODELS



## WEB APP

Connect a front end app for users to upload photos and get results immediately



# Thank you!

QUESTIONS IN THE CHAT BELOW