



Age Image Classification

Srinivasan Ramakrishnan

How old are you?




Table of Contents

01

Business Understanding

04

Evaluation

02

Data Understanding/
Preparation

05

Recommendations

03

Modeling

06

Next Steps



Business Understanding



- Tik Tok has an issue of children putting in fake ages which causes children to be shown content they are not supposed to see

Seeing inappropriate content

Parents have expressed concerns about the inappropriate language of some of the videos posted which may make this less suitable for younger children.

Privacy settings

TikTok users under 18 will have their accounts set to private-by-default, which means only someone who the user approves as a follower can view their videos. The change is part of a wider package of measures designed to drive higher standards of user privacy and safety. Download the updated privacy settings [here](#).

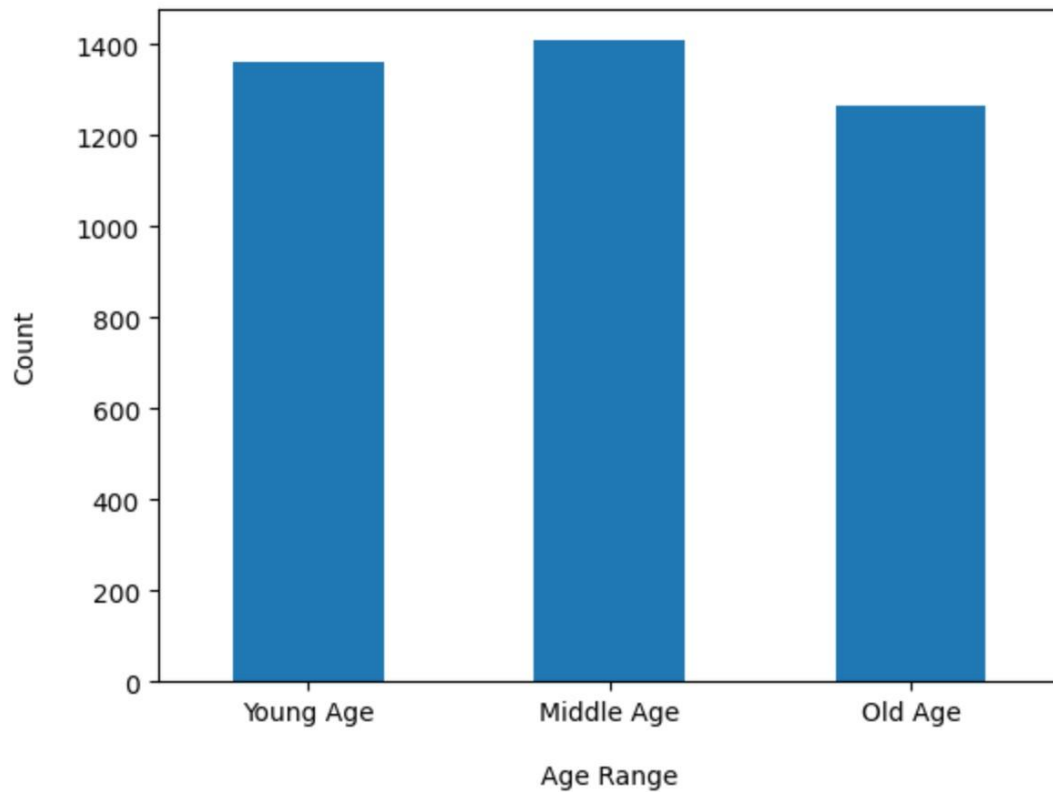


Data Understanding

- 23,000+ images with varying ages
- Data is from Kaggle
- Predicting Age (young, middle, and old age)



Counts per Age Range



Data Preparation

Number of Images
Lowered to 3,000+

Cropped Images for
Face Detection

VGG19 and Resnet50
Preprocessing

Data Augmentation



Original Image



Edge Detection



Original Image



Sharpened Image



Original Image



Edge Detection



Modeling



**CNN Base
Model**

Accuracy: 48%



VGG19 Model

Accuracy: 76%



**ResNet50
Model**

Accuracy: 55%

Evaluation

VGG19

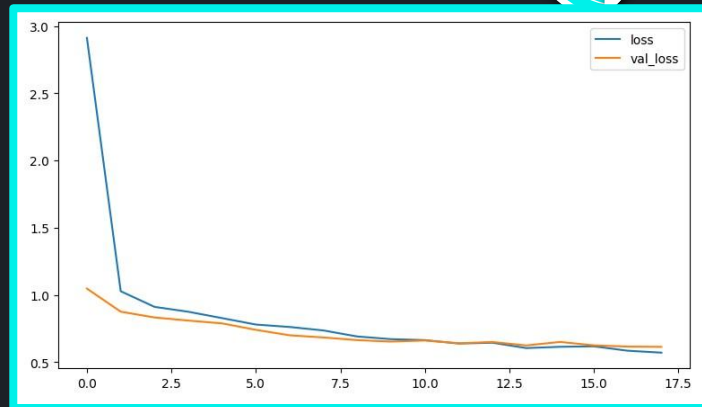
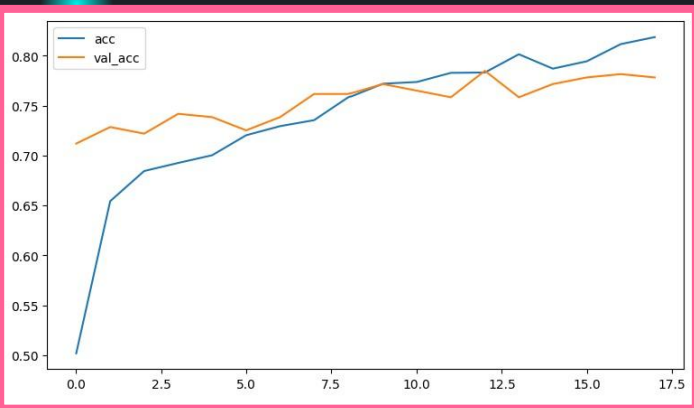
Model

76%

Accuracy

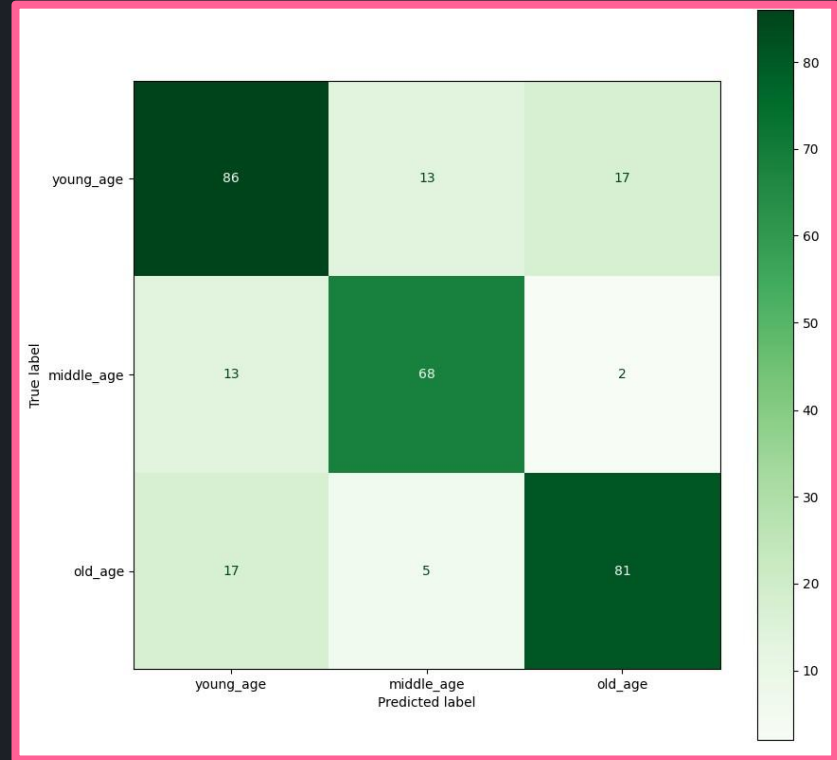
0.64

Loss



Evaluation

- Dense Layer:
 - 256 nodes
 - Regularization(0.001)
- Dropout(0.5)
- Optimizer = Adam
- Early Stopping
- Reduce LR On Plateau



Recommendations



Have users take a picture of themselves as part of the age verification process



Model is not the best with blurry/unclear images



Next Steps

Try to
Sharpen the
Images



Deployment of
the model

Try to predict
on 10 Classes
of Age



Improve the
Accuracy



TikTok

Thank You

GitHub: <https://github.com/srinir301?tab=repositories>

Linkedin: <https://www.linkedin.com/in/srinivasanr1/>