Human Age Detection

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Presentation Outline

- Purpose of Analysis
- Data & Methods
- Results
- Deployment
- Future Steps

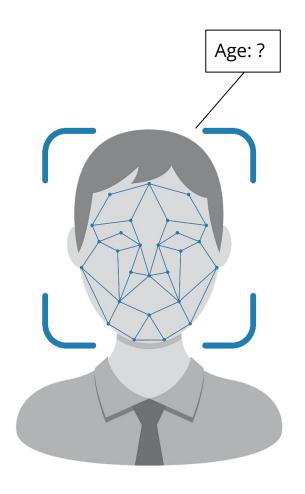
Purpose of Analysis

Detecting age from images of human face

Useful Cases:

- Detecting minors
- Targeted advertisement
- Medical purpose





Data & Method

Data: https://susanqq.github.io/UTKFace/

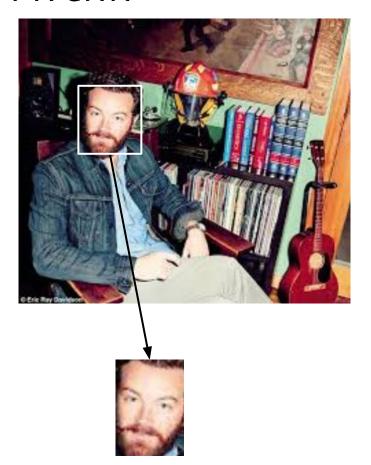
~24,000 images

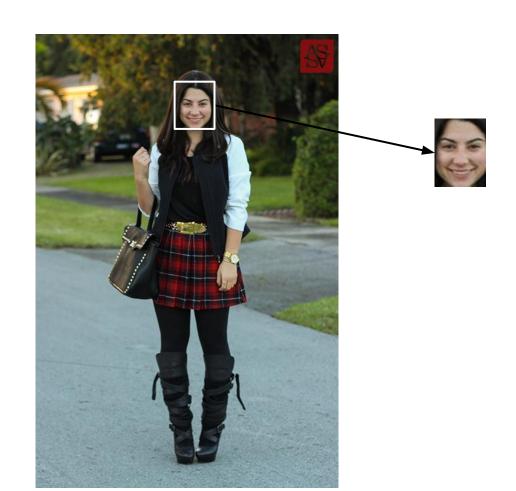
Ages 0-116

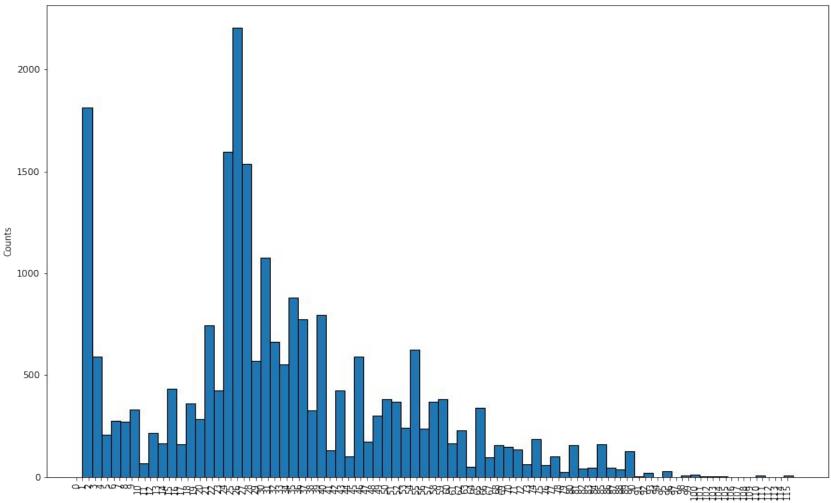
Method: Convolutional Neural Networks (CNN)

Metric: Accuracy

MTCNN





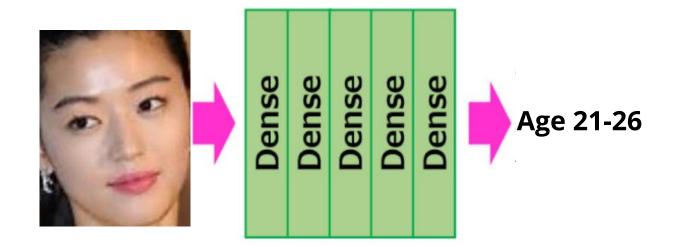


Age 51+ Age 0-20 Age 36-50 Age 21-26 Age 27-35 # of Images: 5,174 # of Images: 4,973 # of Images: 5,284 # of Images: 3,999 # of Images: 4,678

Results

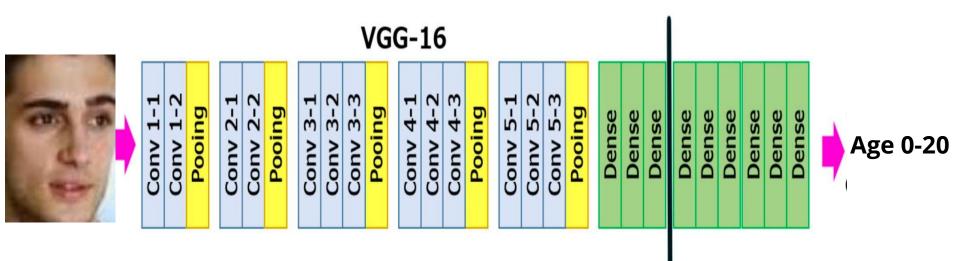
First Model - Dense

Accuracy: ~21%



Results

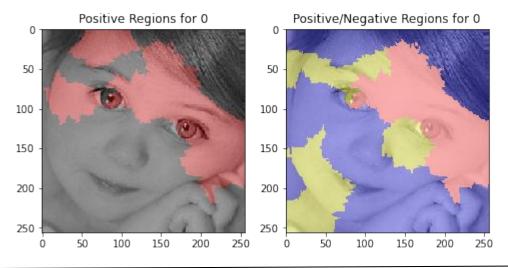
Final Model - VGG16 pretrained model



Results

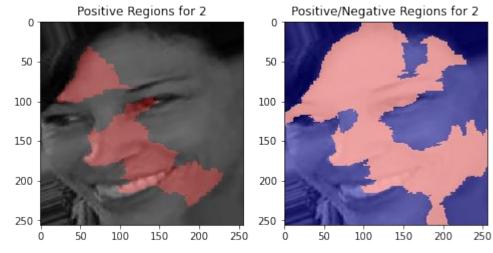
Final Model:

- Accuracy: ~59%
- Predicts ages to be 0-20 more than other classes
- Wrongly predicts ages 36-50 more than other classes



Age 0-20





Deployment

Upload Image for Age Detection

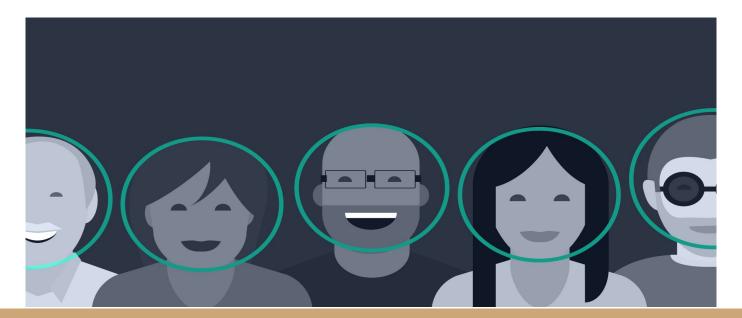
Select an image to upload

Choose File No file chosen



Future Steps

- Make shorter ranges of age
- Ability to analyze multiple faces in one image



Thank you

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