

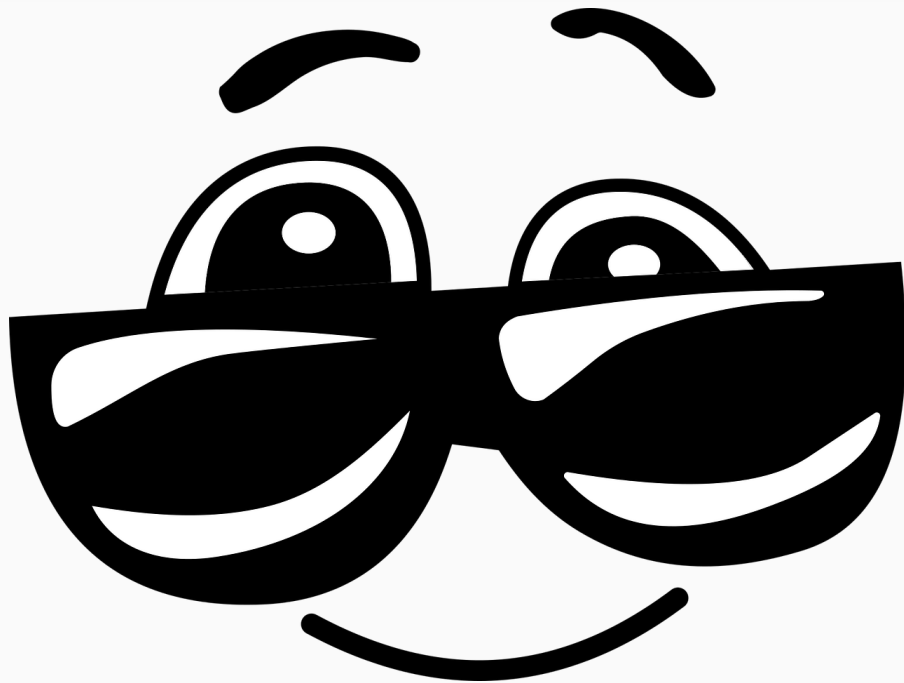
Sunglasses Detection

Natural Chan



Background

- Sunglasses Detection
- Eyeglasses vs. Sunglasses
- **Facial/Object Detection**
- **Classify images**



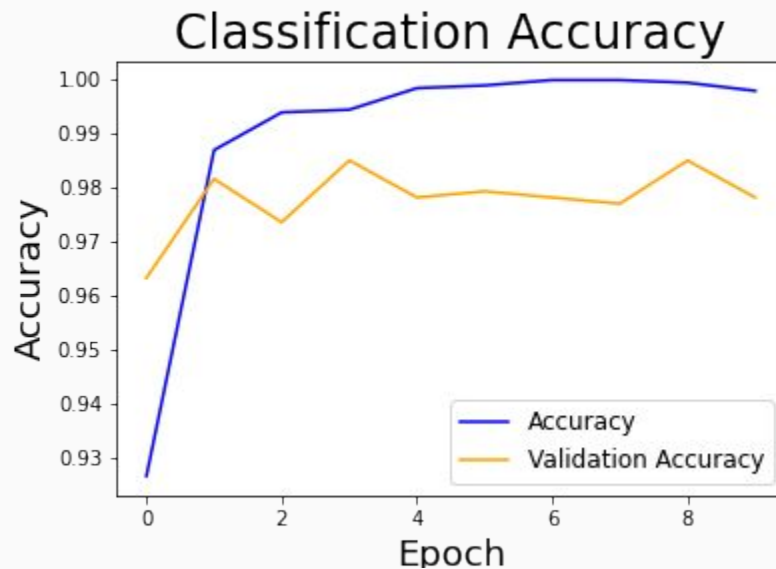
Data



- **Computer Generated**
- **Flicker Faces HQ**
- **Manually Labeled**
- **Shrunk All Images to 224x224**

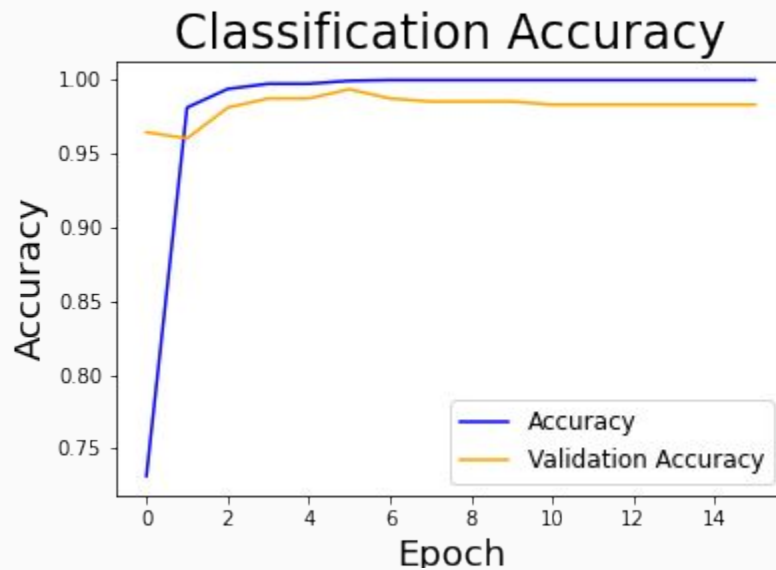
Modeling

- 1 Block VGG
- **Computer Generated & Stock/Selfie Images**
- **Prediction problems**



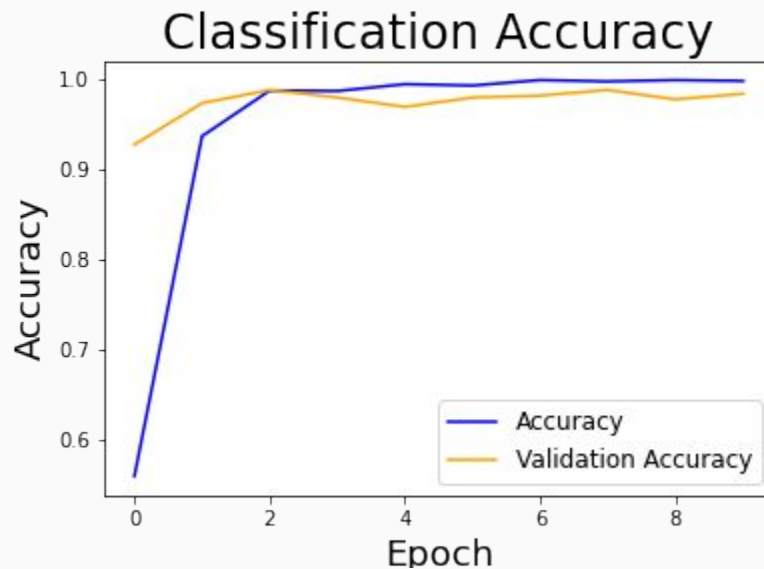
Modeling

- 1 Block VGG
- **Computer Generated & Random Flickr Images**
- **86.33% Accuracy**
- **(76.67% w/ DA)**



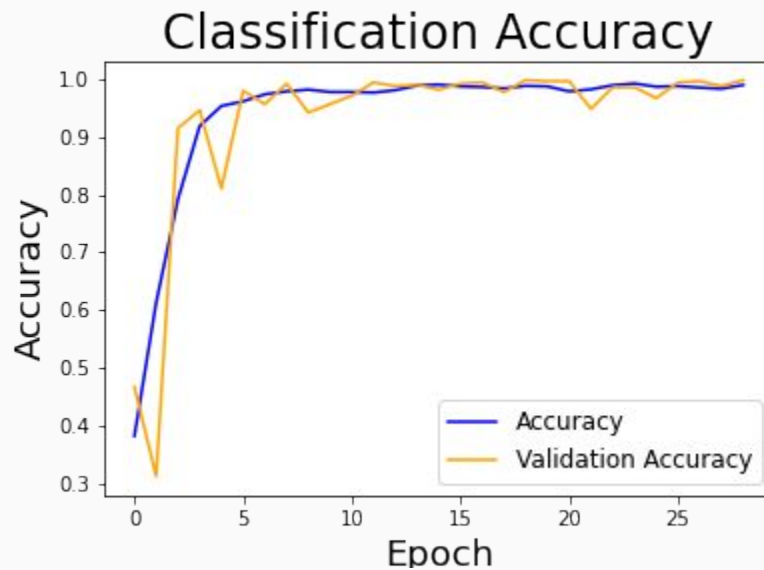
Modeling

- 3 Block VGG
- **Computer Generated & Random Flickr Images**
- **81.33% Accuracy**



Modeling

- 3 Block VGG
- Data Augmentation
 - Flipping/Rotation
 - Random Brightness
- **87.33% Accuracy**



Results



- Misclassifying Eyeglasses
 - Thick Frames
 - Lighting
 - Make-up
 - Dark Eyebags

Conclusion



- Fairly Successful
- Adjust Dataset & Labels
- Train More Complex Model
- GANs to Remove Sunglasses