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Deep Learning w/ Tensorflow

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This paper discusses the work I have done with facial recognition and how I implemented it.

My motivation for this work came from seeing when shows talk about facial recognition in cctv cameras and tracking people down using it. I wanted to see for myself how easy it is to do this on static images and get an idea how close this shows and movies are to reality. This paper will discuss the background and related work that deals with similar problems. It also goes over the approach I have taken to tackle this problem. I large section will discuss the experiments I have done and how well they performed and the bugs I encountered. I will also go over the results and discuss what significance they have. The paper will also go over the overall findings and any references and I used.

Before starting the project I asked competent people in the field if they knew a good basis. One recommendation to recognize faces is viola and jonas face detection algorithm to detect faces in images. I am going to look into universally known facial recognition algorithms and determine how to improve them to build a more successful program.

The approach I took was one that would make it easier to acquire images for testing and training purposes. I decided the face I was gonna try and detect was President Donald Trump's. The reason for this is many images of him are free for reuse and can easily be found via google

images. The focus of my images is around politicians because many images of them are free for reuse. I have collected 100 Training and 100 Testing images which all do not contain images of Trump. The name of the images determined if they contained Trump or not. The format is "x-num" where x would be 1 or 0 depending if Trump is in the image or not. The num would be be leading zeros before a number that would be a counter, both images have the counter start at 0. The next method would be to run the viola and jonas algorithm over this data to box out where the faces would be. The faces that are returned will then be tested to see if they are Donald Trump's face or not. The program will keep trying to train the network to learn what Donald Trump looks like.