**TUTORIAL 10**

**• What is the problem described?**

The problem addressed is about the classification of gender through computer vision. Using Machine Learning techniques and Artificial Intelligence computer systems can somewhat discriminate the gender of a person using the dermatologist-approved Fitzpatrick Skin types and other data. The test results from the companies Microsoft, Face++, and IBM which use gender classification techniques were used in coming up with conclusions. Test results were worse when recognizing individuals with darker skin mostly females.

**• Why is it important?**

It is important in many different ways. As the paper suggests, for an instance in a company it can be used to find who is hired, fired, granted a loan, or even how long someone spends in prison. It can also outsmart the biometric recognition systems used in the present. Predicting gender using facial recognition systems in the medical field can improve health care systems where most of the problems in health are not common for both males and females. And in security systems and also in looking for criminals or someone who is lost and not found.

**• Whom does it impact and how?**

It can impact individuals of different ethnicities since the facial features may differ from one ethnicity to another. Furthermore, facial feature classifications of different ethnicities may differ for example the facial features of an East Asian male can be sometimes recognized as a light-skinned female if the facial recognition is lacking in datasets obtained from the test results of East Asians.

**• What causes can you identify?**

Lack of data sets and need for more technical improvements. AI systems are not that advance to recognize, understand and remove bias.

**• What solutions can you suggest?**

Although it’s impossible to provide a 100% accurate solution. I would suggest it’ll be better to work on the Fitzpatrick skin types IV, V, and VI more since the results for lighter-skinned individuals were better than that of the darker-skinned individuals. New features and capabilities that continue to significantly enhance the overall performance should be developed with time.