Cohort 12: 4th Meeting Minutes

14th of October 2022

Group: 48, Chair: Nkosingiphile Ndabandaba, Minutes: Ishmael Sithole

Apologies: Joseph Baggott, Robin Jonker

Benjamin Palay and Raphi Druion (Facial recognition)

Checked the hair color and If someone is bald. Analyzed all the features and have integrated and it's all good. The object is to display a face and improve the image shown.

Haffejee Mohammed and Thabo Tshabalala (App to scan pool water test strips)

Low-brightness and contrast of image resultant from images taken in normal light conditions with a smartphone which led to false detection of edges for color patches and a lot of noise in the image. The solution is the use of image enhancement techniques to increase the contrast and brightness of the image. This enable for more accurate color detection of the patches and test strip detection.

Objective next week:

- Create an algorithm for comparing reference chart colours from the patches and provide a results for each component.
- Compare colour spaces (LAB, HSV and HLS) that are close to the human perception to improve accuracy of results.

Joseph Baggott and Hraklis Papageorgiou (The world's protest capital)

Had an issue with total API. It takes 3 hours to get 100 subscribers. Its working but we will have to make some changes. Working on a way to display the data.

Muchaveleli Manjate and Devlan Mckenzie (Network firewall management and visualization)

We swapped to python and made a data frame for the ruleset. We met with the prof and got advice on binary decision diagrams and looked at tulip and control dd packages to make the bdd and this week we want to try get the bdds up and running

Started with the expression. Boolean expression work fine, the problem is the IP address. The idea is to convert each rule into a Boolean expression

James Allsop and Johann Gouws (Mapping the Rainbow)

Locating the images, look for more data to test the model. Qgis which open source and stoichiometry. Tested the model with picture. Next week integrate.

Robin Jonker and Tristan Lilford (Location aware scientific workflows)

Got dynamic node selection working as we wanted. Can be integrated into any workflow that uses a slurm scheduler as its choice of execution. Did research into executing on AWS.

Rael Ware and Gia Croock (Cheap air Quality Reporting Station)

Finished the angular app for the user interface where a user can iterate through images and tweak the features. They can also submit a rating of success at the end which we can see in a real-time database.

The plan for next week is to build an ML model to try and predict hair length and color and integrate with the app.

Ahmed Ibrahim and Kevin Naidoo (The lost cities of South Africa)

Implemented an SSD network, right now they have some pictures for the dataset. The machine learning model is able to label circular stone images. Need more images in their dataset. They will apply their CNN for faster RCNN. Use map technology to find the images that the learning model can identify.

Nkosingiphile Ndabandaba and Ishmael Sithole (Fast genotype calling)

Managed to read the idat files and output raw bytes and use UTF8 reader to convert them into readable characters.

PROF Scott. write report and be busy with repo and maintain. Justify every solution

Meeting adjourned.