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CAP 6655 Computer Vision

Project 1 Proposal

This project aims to develop a computer vision algorithm to detect faces in an image or a video. The purpose is to find the locations and sizes of all the human faces in the image or video provided to the algorithm and distinguish them from other objects. In particular, the algorithm should surround each face detected with a bounding box and should work both for statical images and videos.

My future goal is to develop my algorithm in order to do further operations with the faces detected (such as emotion detection). So, in this first project I'm going to test different approaches to face detection proposed in literature and to try modifying them to achieve better performance.

Eventually, the different approaches will be compared in order to find the best suited for the future development of my project which aims to extract more information from the faces detected.

The algorithms will be implemented in Python, using the most popular libraries such as OpenCV, TensorFlow etc.