Real Time Mask Control Identification Model for Government Control Enforcement

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Setting/Context

The environment in which my capstone will run on is a python application powered with Nero network machine learning that the user will be able to interact with by viewing the possibility percentage if the person Infront of the camara is wearing a face mask or not

Capstone Problem and Rationale

The purpose of this capstone project is to give the governments, police enforcement law and authority the tool to identify and potentially assist locating individuals who are in falls of wearing medical face mask in the time of crisis and such COVID-19. The need for this technology arises in its simplicity as there is no current application available out there or they are either complex or not modern enough to provide the complete potential and use with the right reach. The use of a simple tool that does not require prior knowledge is the goal that I want to achieve here. I will apply and support my application with huge dataset collected to train my model that will reflect better understanding of the application thinks and interact.

The data that will be integrated into the application will be retrieved from the images and website and categorized with classification to power the information and understanding of the program.

The application will consist of a modern AI and Nero Network machine learning packages that are already out there and within python. The data will be represented collected using the internet where the goal is to collect around 6000 images of people wearing medical face masks and not wearing it. This well help display the accurate result for the people who are wearing one or not, the program will scan the visual in real time using (real time camara that is open) to look for people in the scene and try to showcase the percentage and possibility of them wearing a mask or not, this will be represented by a square pointed on the image. When the person walks in the camara area it will automatically detect it and score a real time possibility percentage based on what it had learned from the images before. These will require a deep correlations and relationships between different variables provided by the data source to achieve the required.

Objectives

The objective of this project is to provide the governments, police enforcement law and authority with better understanding of the people who are wearing masks and not in an interactive real time manner. The response to the needs mentioned above is to design a vision tool powered with machine learning network that can be used through drawn with conclusions from datasets collected.

Deliverables
- Python Code
    - Datasets collected and sorted
    - Trained Machine Learning Model

○ Documentation of usage and prototype

Project Description

Timeline:
1. Finding and getting to know the data
   a. Exploring the data to know what I will work with and to check if it's legal/free to use
   b. Figuring out the format of the data and how it will be collected
2. Collecting data
   a. Figuring out how to collect and input the data into our application
   b. Group the data into workable format
3. Processing data
   a. Converting and organizing data so that it meets the requirement of the tools that I will work with
4. Representing data
   a. Display the outputted data result in good manner.
5. Enhancement and optimization of the application
   a. Debugging
6. Presentation

Resources

Hardware	Computers
Software	Python
Data Formats	Json, CSV and Images Format
Thoughts	Peace & Hope