Project: Real-time Face Mask detection

Business Problem:

Most organizations and institutions are following stringent norms for prevention of the spread of Corona Virus such as social distancing, hygiene, etc. One important aspect is for all employees to be wearing face masks to contain this spread. Organizations are looking for applications that can detect if their employees or visitors are wearing face mask while entering their premises. They would like to use a network of cameras that can detect any breach of such instance and trigger a security alarm.

Input provided for the project: Dummy dataset of pictures (about 500 images) with different faces and facemasks will be provided. Students can also download similar pictures from internet.

Output expected: Trigger a voice alarm through a speaker, in case of breaches after detection of person without facemasks. For this project, use your laptop camera for detection and laptop speaker for generating an alert message.

NOTE: Students are expected not to use any existing APIs of any Cloud or AI service providers like Microsoft, AWS, Huawei, Google, etc. for developing the program as this project is intended to test the knowledge of students in the development of such applications.

Tools to be used: Anaconda software

Delivery timelines: 3 weeks (21st JULY 2020)

Prior knowledge required to complete this project:

- Understanding of deep learning algorithm like CNN, SSD, YOLO
- Experience with Python and TensorFlow