Final Project
DL and Computer Vision

Data Science for Business Masters Program (2024)

Computer Vision Tasks:

1. Train an object detection model using the provided dataset, which consists of 262 images and includes 5 classes such as **“label”, "crumbled", "not-crumbled", "cap" and "no-cap" .**
2. Utilize the trained model to perform inference on the video, with the goal of counting the number of normal and defective bottles. A bottle is considered normal if it satisfies the following conditions:

    - It is not crumbled.
    - It has a proper label.
    - It has a cap.

3. Save the inference results in a video format, showcasing the detection outputs along with the counts of normal and defective bottles.
4. Push all the project code to a specific repository, ensuring that the repository is organized and well-documented. Include a README file with instructions on how to reproduce the results and run the code.

Deep Learning Task:

5. Select a relevant paper related to deep learning, describe the methodology used in the paper, summarize the experiments conducted, and present the results. For the highest grade, implement the described method by running an inference using the GitHub repository associated with the paper.

Please note that Tasks 1-4 pertain to computer vision and will be evaluated independently as part of the final grade for the CV project. Task 5 will be assessed separately as part of the final grade for the deep learning project.