**Computer vision based analytics pipeline**

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**Problem Statement:**

With the increased functionality and opportunities to employ image and video object detection systems like YOLO (You Only Look Once), there is a need for data pipelines capable of leveraging the technology. To provide adaptability in selecting which machine learning application is implemented, the pipeline needs to perform the file and data handling steps while being configured to call the desired application. While this project is leveraging YOLOv3 due to its proven track record as well as reliable documentation, the calls to YOLOv3 will be generically developed to enable configuring other such applications.

**Available Data Sets:**

With unlimited amounts of images and videos online, there is no end to the amount of visual data that can be leveraged to test the created pipeline. Due to the large quantity of visual data from so many sources, there is a wide spectrum of verification data.

**Project Pipeline Development:**

Pipeline develop will include:

* Receive an image or video,
* Pass the supplied content to the configured ML application,
* Receive the returned data from the ML application,
* Store the returned data in a database,
* Generate a report of processed data and returned data, and
* After developing, testing, and verifying the process on a local computer, move the processing to the cloud to increase throughput by means of parallel processing.