**WAREHOUSE STOCKS MONITORING**

A PROPOSAL PRESENTED BY

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for the partial fulfillment for the requirement for the course of

CS 314 Image Processing Practical

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**INTRODUCTION**

This tool will detect all the vacant spaces on the shelves of a warehouse using the cameras mounted in front of the shelves. In the meantime, it will detect and categorize all the available stocks. Also, it will update the available stocks and the vacant storage spaces in real time. This tool will be able to recognize all the storage boxes, irrespective of their color. **(Even if the box is the same color as the wall, it will be able to detect the storage box separately.)**

**OBJECTIVES**

* Implement a program to identify objects, estimate stock levels, and track changes in stock positions.
* Real-time monitoring of stock levels and generating alerts for low stock or inventory discrepancies.

**APPROACH**

**Camera Setup:** Set up one or multiple cameras strategically in your warehouse to capture the areas where stock monitoring is required. Ensure proper lighting and camera positioning for clear and consistent image capture.

**Image Processing:** Process the captured images using OpenCV functions to enhance quality, remove noise, and improve object detection accuracy. Common image processing techniques include resizing, thresholding, edge detection, and noise reduction.

**Stock Counting:** Once the objects are detected, count the number of instances of each item and categorize.

**REFERENCES**

In this project, I'm using my own creation of 20+ photos.