Vision Programming Challenge

Introduction:

Thank you for agreeing to spend your time to solve this programming challenge in vision domain for us. We will evaluate your solution based on accuracy, code quality, and how clearly you describe your technique.

Problem Statement:

This task attempts to gain a better understanding of your knowledge of computer vision as well as programming capability. Edge detection is a preliminary but important step in computer vision. The goal of this challenge is to detect the edges in a checkboard and highlight them with a green line superimposed on the image.

Different sample images are provided to test your code with. The ideal solution will be modular, object-oriented and be able to deal with different image sizes and different number of squares and their respective sizes. It should also be robust to noise and rotation.

The different filters used should be implemented in a modular and parameterizable form. Popular image processing libraries like **OpenCV,** which are open source can be used. It is ideally expected that the candidate solves the problem using **C++** language. **Python** can be used but **Matlab** is not permitted.

Expected Result:

For C++, the EdgeDetector.hpp and EdgeDetector.cpp files should be filled in. If any libraries are required, add them to the CMakeLists.txt

For python, the edge_detector.py file should be filled in. Instructions must also be provided to download and install any required python packages.

It should be possible to provide different images as input to your code and show the output as the image with the edges detected as green lines

Also, provide a Readme.md file detailing instructions on installation, implementation steps, concepts used and possible improvements.