

DIP Report

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Introduction

We are given an image of an academic calender and we are supposed to extract the text from it. Since the calendar is divided into blocks where each block contains some information about the day or week or month. The first thing to do is to separate the image into these blocks so that we can identify the type of information present in the image and also it would be easier to detect the text in the block rather than from the whole image.

Detecting the edges

We have experimented on various filters for detecting the edges in the image. Some of them are:

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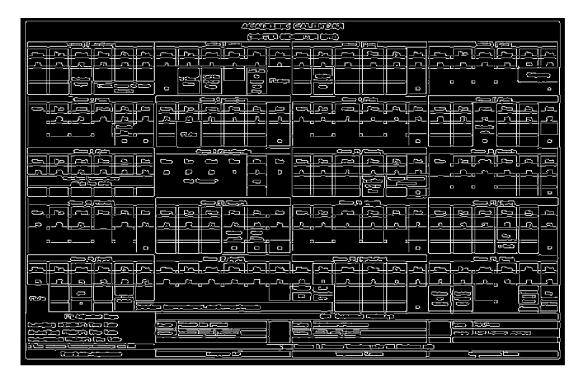
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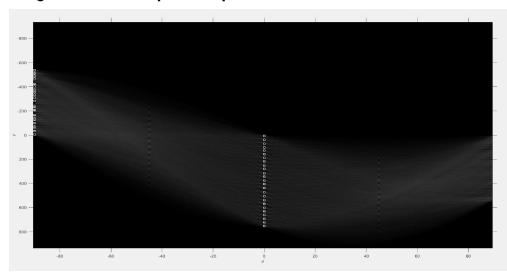
Canny Edge detection:



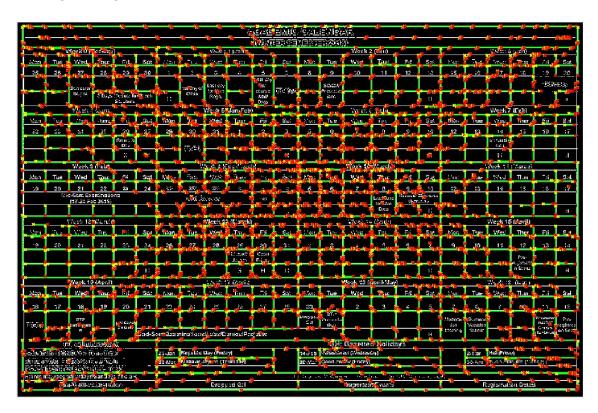
The above images are obtained by converting the image into an grayscale and then the filters are applied to them. So we can see that the images from sobel and prewitt has best preserved the edges from the given image.

For detecting the edge we perform a hough transform and then look in which filtered image max no. of edges are being highlighted.

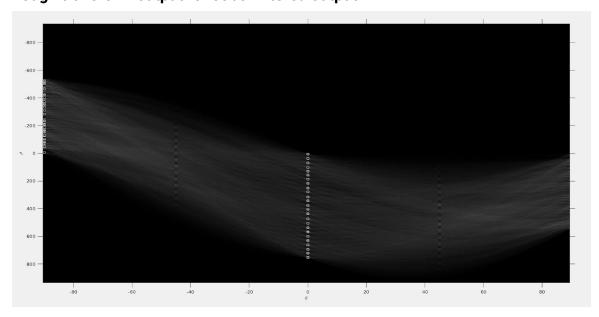
Hough transform output for laplacian filter:



We find the peaks with theta = -90 or 0 because all the edges are either horizontal or vertical. We got a total of 44 edges, 19 vertical and 25 horizontal. So after highlighting the edges we get:



Hough transform output for sobel filtered output:



We get 20 vertical 25 horizontal edges. So highlighting the edges we get:

