MINI PROJECT

Image Stitching with OpenCV and Python

INTRODUCTION

Image stitching or photo stitching is the process of combining multiple photographic images with overlapping fields of view to produce a segmented panorama or high-resolution image. Commonly performed through the use of computer software, most approaches to image stitching require nearly exact overlaps between images and identical exposures to produce seamless results, although some stitching algorithms actually benefit from differently exposed images by doing high-dynamic-range imaging in regions of overlap. Some digital cameras can stitch their photos internally.
Image stitching is one of the most successful applications in Computer Vision. Nowadays, it is hard to find a cell phone or an image processing API that does not contain this functionality.

PROBLEM STATEMENT

To stitch multiple images together, creating a panorama of stitched images.

METHODOLOGY

In this project, we will perform image stitching using Python and OpenCV. Given a pair of images that share some common region, our goal is to “stitch” them and create a panoramic image scene. We are using Brown and Lowe Algorithm to stitch each frame. It uses SIFT for feature matching. Brown and Lowe is one of the most traditional and popular algorithm for image stitching, it is very robust and prone to error against distortions.

EXPERIMENTAL RESULTS

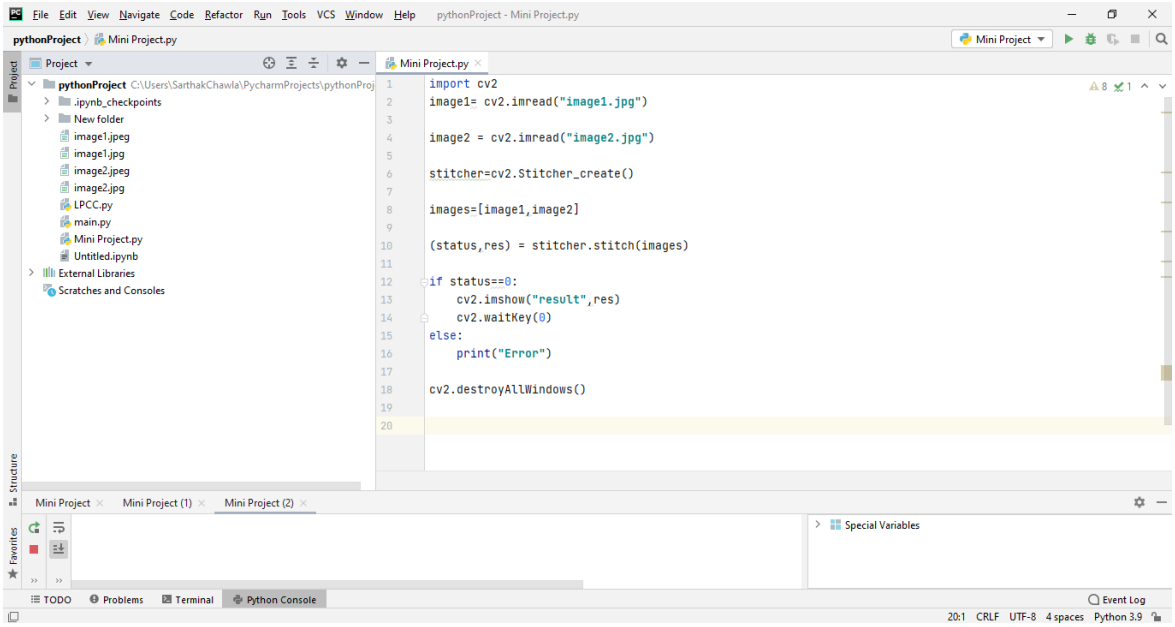

image1

image2