Mobile Robotics

Two View Sparse Reconstruction

Roll no. 20161103

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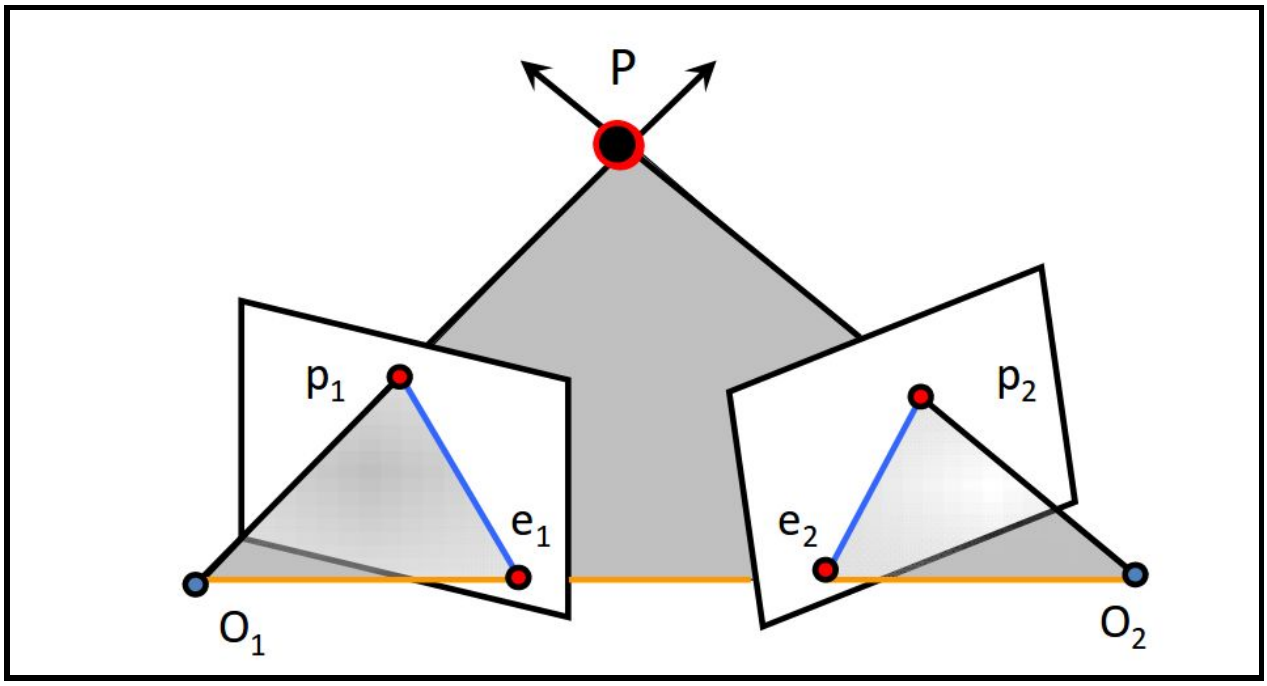
Introduction:

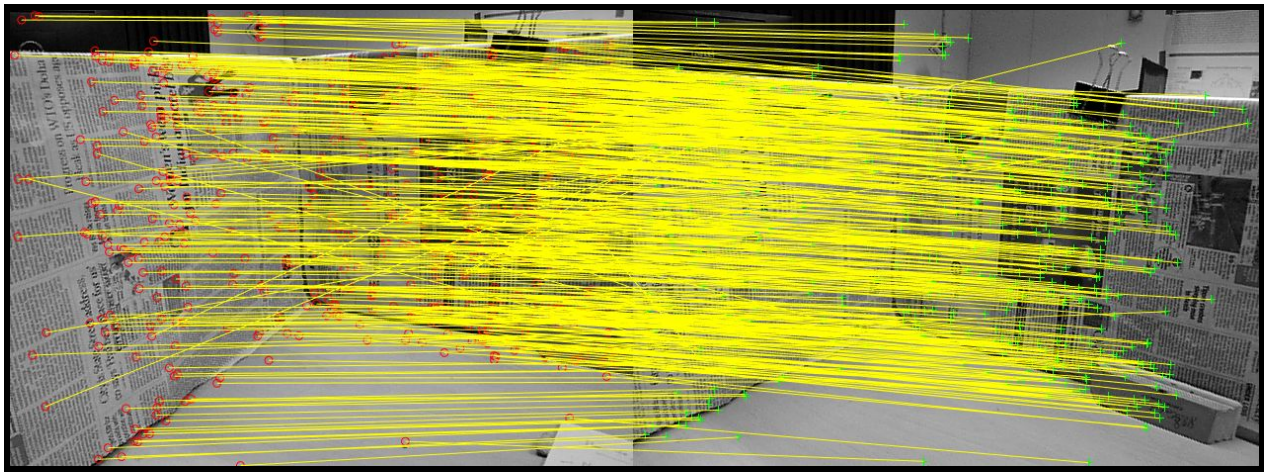
The objective was to reconstruct the scene being captured from a calibrated monocular camera. Two images were given and using the epipolar geometry, we computed the fundamental matrix. From F, we then computed E and triangulated the corresponding 2D points



Result:

```
------------------------------------------------------------
R:
    0.9897   -0.1159    0.0834
    0.1136    0.9930    0.0318
   -0.0865   -0.0220    0.9960

T:
    0.9897   -0.1159    0.0834   -0.9112
    0.1136    0.9930    0.0318    0.0064
   -0.0865   -0.0220    0.9960    0.4119
         0         0         0    1.0000

F:
    0.0000    0.0000   -0.0012
   -0.0000    0.0000   -0.0048
    0.0014    0.0041    0.0686

E:
    0.1643    1.4199    0.0235
   -1.1412    0.2354   -3.2687
    0.3812    3.1374    0.1025

------------------------------------------------------------
```

Matched Features and Images:



3D Reconstruction: