

# Talluri Surya Teja

**15EE3508**

I have used Matlab to do the assignment

## Extracting Features

I have used `detectSURFFeatures()` function to extract all the SURF features of images

I have displayed 5 strong features of the images with their orientation



By using `extractFeatures()` and `matchFeatures()` we match the common features

There are total of 22 common features



## Fundamental Matrix

By using `estimateFundamentalMatrix()` it randomly chooses 8 points (so matrix changes every time we run) and find fundamental matrix by RANSAC Algorithm

Fundamental Matrix:

2.15124380686708e-07	4.67040243919577e-06	-0.00146426878923856
4.94310762762078e-06	-7.43404421036005e-07	-0.00341047465952049
-0.00133507342680101	-8.10723333629771e-05	0.999992217751630

For finding epipoles, Apply svd and from first and third matrix we can get epipoles

ep1 =

480.4455

309.0720

ep2 =

831.8305

312.7878



## Epipolar lines

I found using `epipolarLine()`

