

Q3-1. Clearly mark one example point selected in image 1, and the three corresponding epipolar lines in image 2 -- first for $F(0)$, second for $F(1)$, and third for $F(2)$ (use different colors for depicting the three epipolar lines), as illustrated in the figure below.

$F(0) = \text{FuchsiaLine}$, $F(1) = \text{WhiteLine}$, $F(2) = \text{AquaLine}$. It looks like the $F(2)$ is the best.

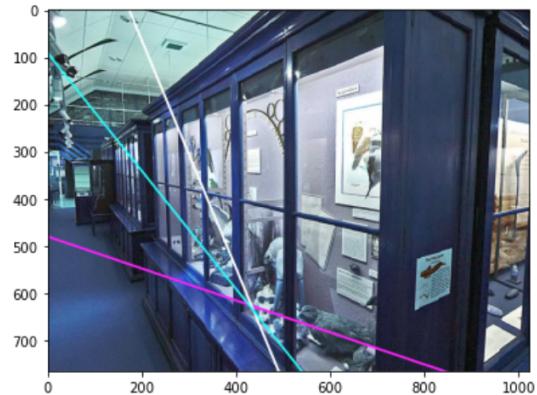
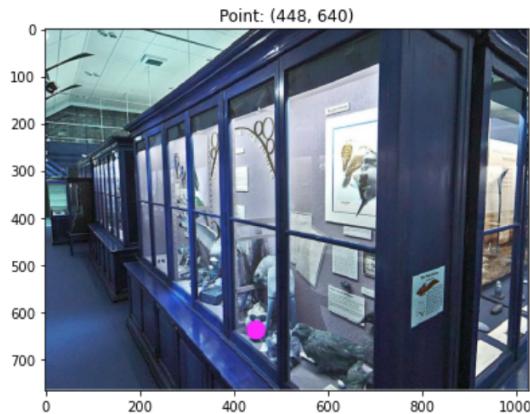
The point I chose is following below:

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tensor([[448.3873, 640.7241]])
tensor([[394.9945, 422.6608]])
tensor([[401.1541, 121.7401]])
tensor([[279.9955, 217.0679]])
tensor([[698.8479, 159.3039]])
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$$\text{Line0} = 0.00070 x + 0.00207$$

$$\text{Line1} = -0.00585 x + 0.00243$$

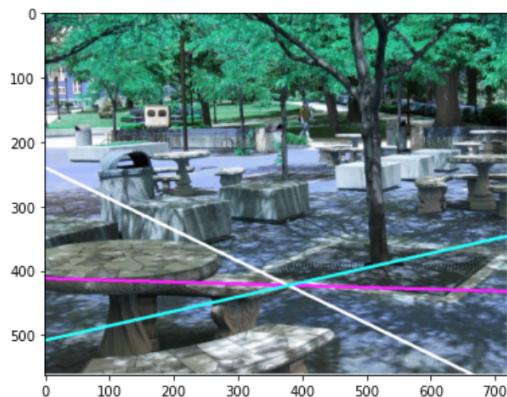
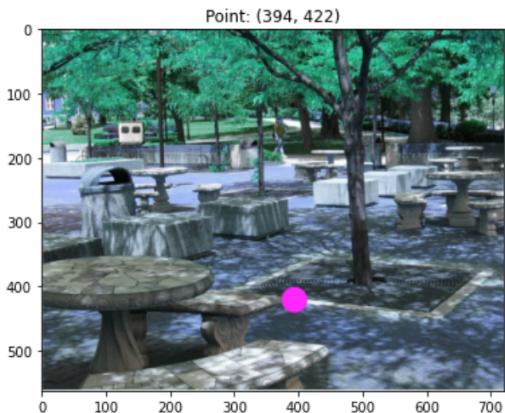
$$\text{Line2} = 0.01290 x + 0.01035$$



$$\text{Line0} = 0.00007 x + 0.00242$$

$$\text{Line1} = 0.00200 x + 0.00414$$

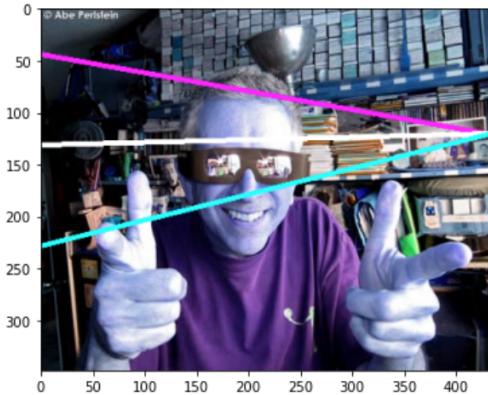
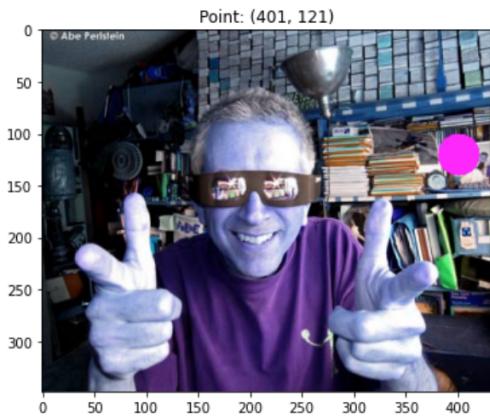
$$\text{Line2} = -0.00044 x + 0.00196$$



$$\text{Line0} = 0.00387 x + 0.02188$$

$$\text{Line1} = -0.00020 x + 0.00752$$

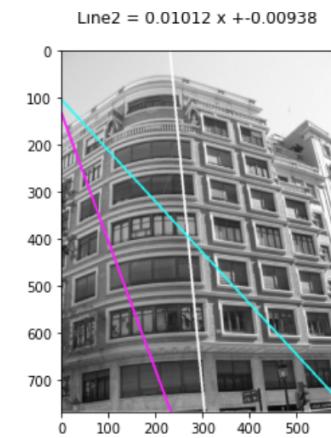
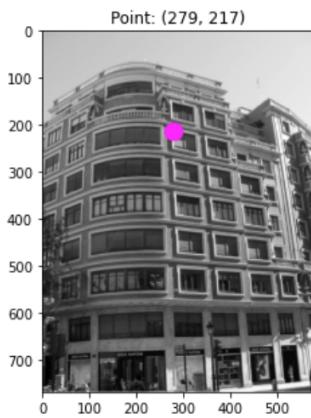
$$\text{Line2} = -0.00109 x + -0.00435$$



$$\text{Line0} = 0.02015 x + -0.00741$$

$$\text{Line1} = -0.00433 x + 0.00042$$

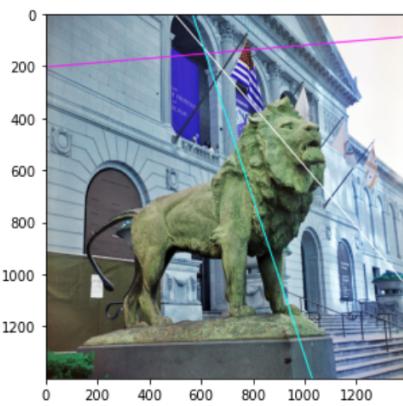
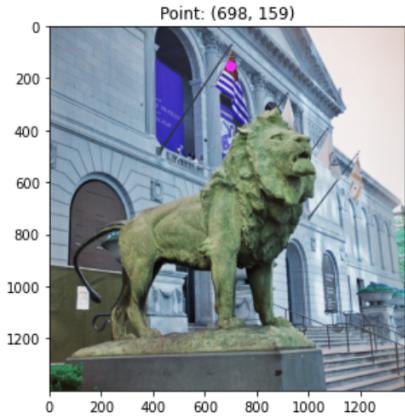
$$\text{Line2} = 0.01012 x + -0.00938$$



$$\text{Line0} = -0.00040 x + -0.00483$$

$$\text{Line1} = -0.00203 x + 0.00175$$

$$\text{Line2} = -0.00177 x + 0.00059$$



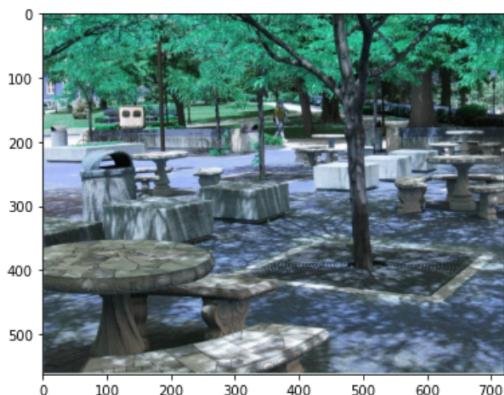
Q3-2. Clearly mark the epipoles of image 1 and image 2 for $F(0)$, $F(1)$, $F(2)$ (use different colors for depicting the three epipoles) if they fall inside the image boundaries.

F0:DeepSkyBlue, F1: Purple, F2: yellow.

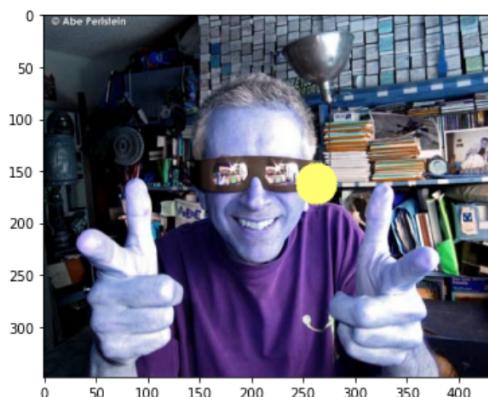
F0's epipole (-1639, -70, 1) outside of image
F1's epipole (166, -9, 1) outside of image
F2's epipole (-40, 147, 1) inside of image



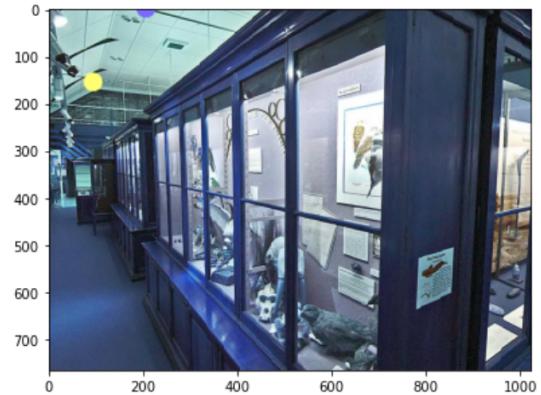
F0's epipole (-6944, 217, 1) outside of image
F1's epipole (-106, 190, 1) outside of image
F2's epipole (976, 290, 1) outside of image



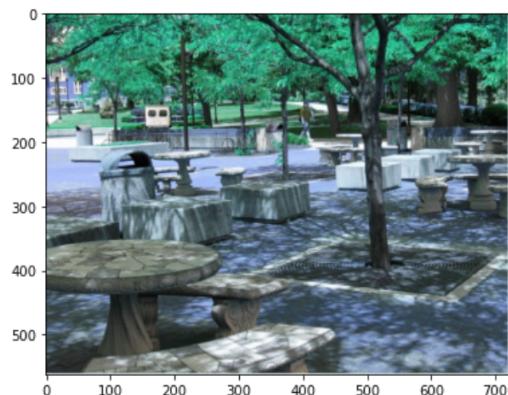
F0's epipole (-2841, -456, 1) outside of image
F1's epipole (-2817, 206, 1) outside of image
F2's epipole (263, 163, 1) inside of image



F0's epipole (-1525, -41, 1) outside of image
F1's epipole (205, 1, 1) inside of image
F2's epipole (93, 157, 1) inside of image



F0's epipole (-6624, 221, 1) outside of image
F1's epipole (-78, 189, 1) outside of image
F2's epipole (1002, 292, 1) outside of image



F0's epipole (-2015, -306, 1) outside of image
F1's epipole (-3232, 223, 1) outside of image
F2's epipole (214, 160, 1) inside of image



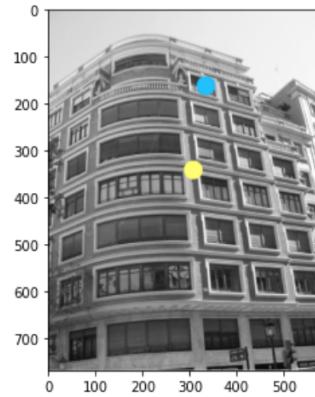
F0's epipole (2618, 7257, 1) outside of image
 F1's epipole (341, 1151, 1) outside of image
 F2's epipole (528, 676, 1) inside of image



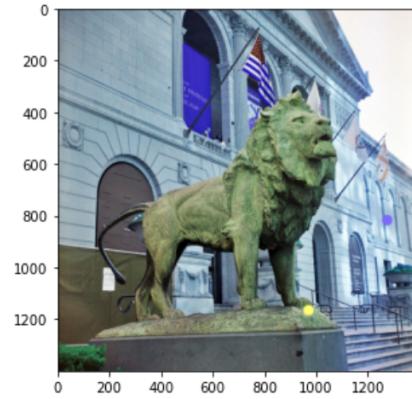
F0's epipole (-3107, 466, 1) outside of image
 F1's epipole (1198, 819, 1) inside of image
 F2's epipole (929, 1105, 1) inside of image



F0's epipole (335, 164, 1) inside of image
 F1's epipole (475, 1797, 1) outside of image
 F2's epipole (308, 343, 1) inside of image



F0's epipole (-3049, 470, 1) outside of image
 F1's epipole (1272, 818, 1) inside of image
 F2's epipole (968, 1165, 1) inside of image



Q3-3. In the figure caption specify: (a) the row and column of the point you selected in image 1; (b) comment if the three epipolar lines (closely) pass through the right corresponding point in image 2; and (c) comment, based on your observation of the three epipolar lines in image 2, which estimate $F(0)$, $F(1)$, $F(2)$ is the best.

- It shows in the upper images of Q3-1.
- In the image 1, 2, 3, the three epipolar lines closely pass through the right corresponding point in image 2. In image 4 and image 5, only the $F(1)$ and $F(0)$ closely pass.
- I believe the $F(2)$ is the best.