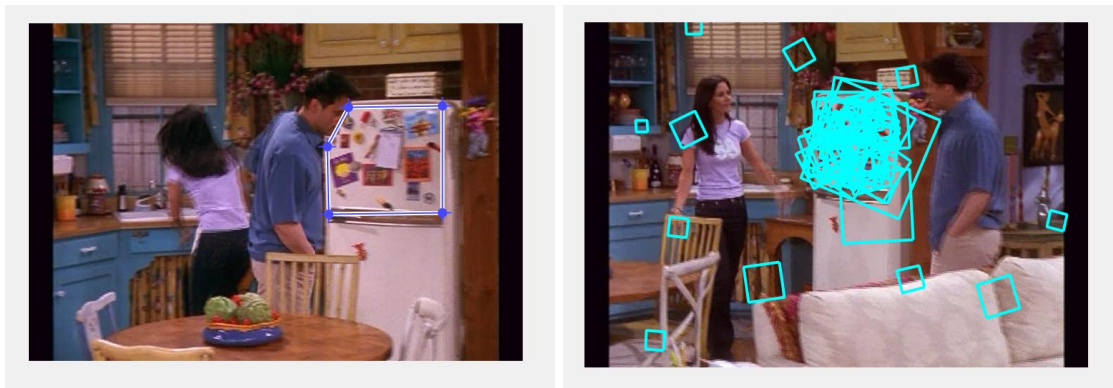


# Programming

## 1. rawDescriptorMatches.m

The selected Region function is used on the left side and the result matches are on the right side. The false positive boxes were ignored using the **threshold value of .75** in the code.

According to the slide .75 or .25 would be good values to choose.

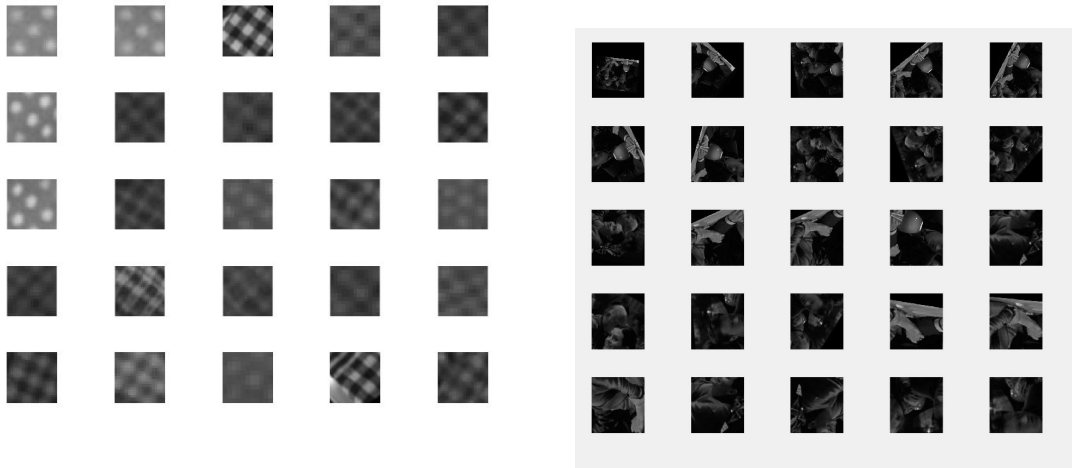


## 2. Visual Vocabulary

Visual Vocabulary is built based on two distinctive visual words. At first, I chose two random words from two different clusters. These results are not the best because the distances might not be optimal.



However, here is the result of good visual vocabulary that shows certain texture patterns. This is chosen by calculating distance of two words and finding the largest distance which differentiates two words.



### 3. Full Frame Query

fullQueryFrame = 'friends\_0000000065.jpeg';



- Based on first query results can be seen that there is one frame that is a bit off compared to other frames which are pretty similar to the original query. It could be related to texture of clothing in the query image that matches some similarity.

fullQueryFrame: 'friends\_0000000515.jpeg'

The second result is due to change of camera frames and rest of results



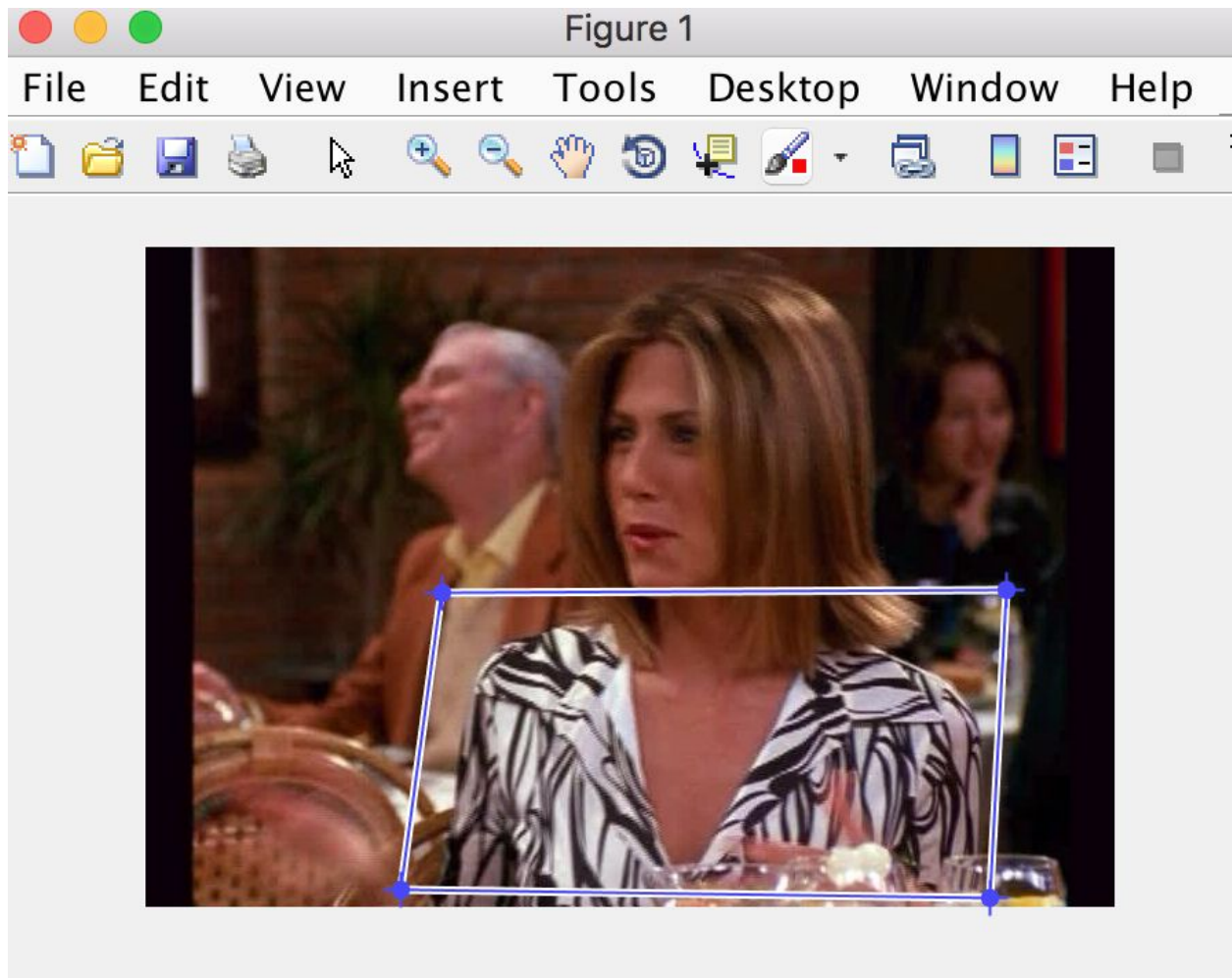
Last query : perfect results

fullQueryFrame = 'friends\_0000000600.jpeg';

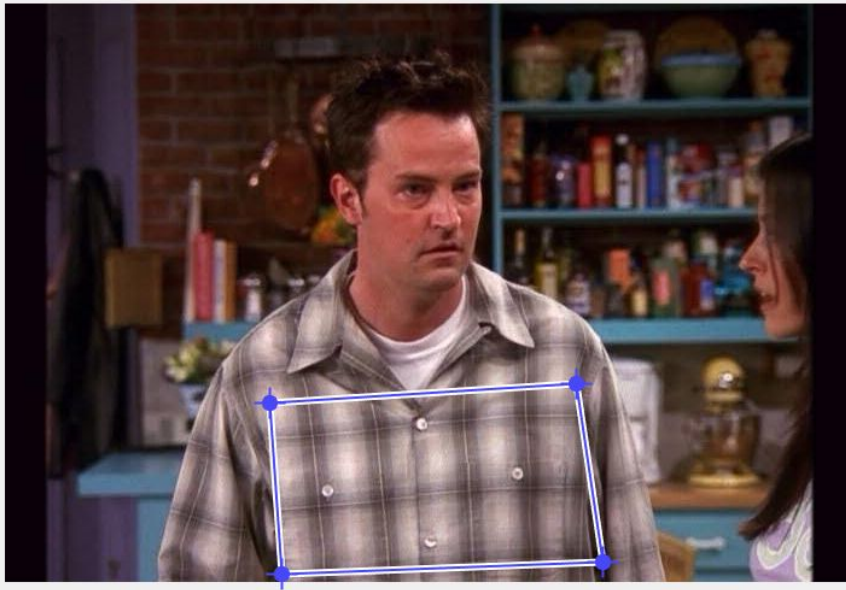


#### 4. Region Query : 4 frames with M=5 similar results

Selected region is similar texture from input of query region of example. The idea is same previous part but instead of full frame, we can find selected descriptors to find in histogram.









Failure Cases of Query Region : this selected region is not very unique which can be found in different frames and match certain descriptors.





