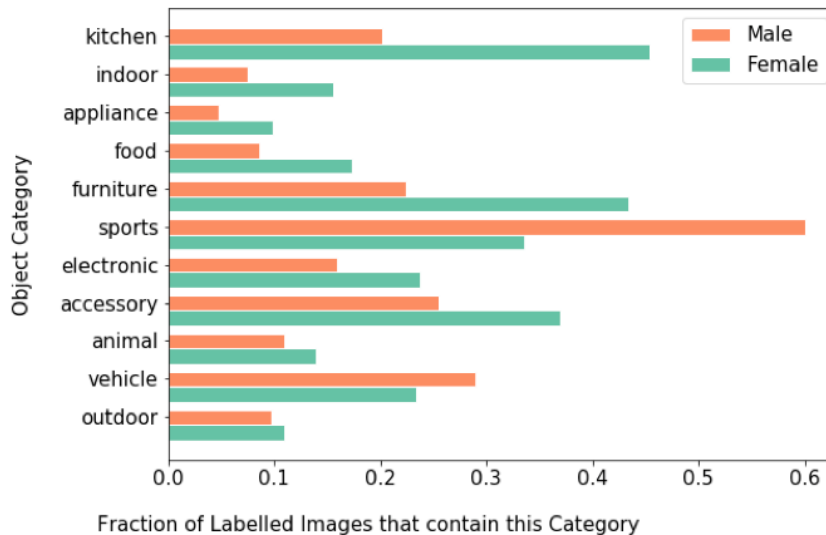# Attribute-Based Summary

Overview Statistics

(att_cnt) Distribution of object categories each attribute appears with, sorted by ratio between the max count attribute and min count attribute.

Males are more likely to be pictured with sports objects than females, who are more likely to be pictured with kitchen objects.

(att_scn) Distribution of scenes that each attribute appears in, sorted by ratio of the max and min attribute counts of the scene.

Males are more likely to be pictured in "mountains, desert, sky" scenes than females, who are more likely to be pictured in "shopping and dining" scenes.
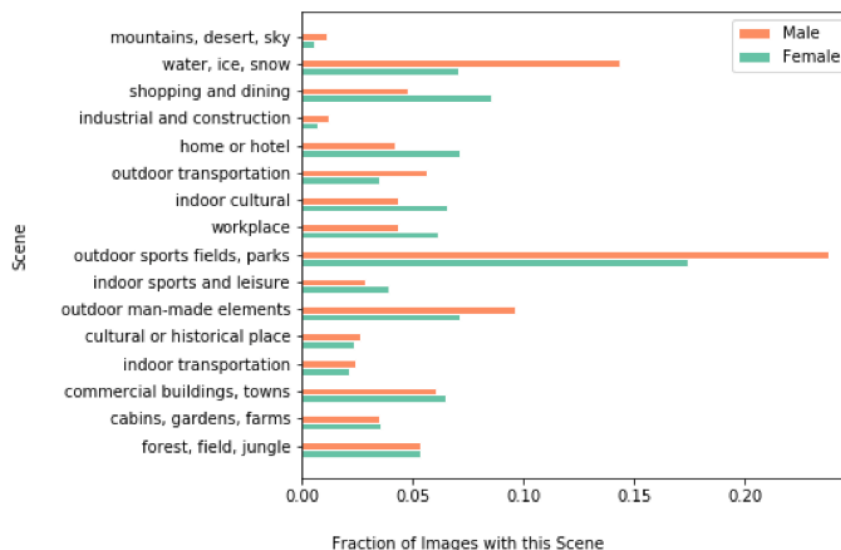

Sample Interesting Findings

(att_siz) Probability image is labeled Male when it should not be, i.e. given there's no face detected or person is too small: 0.7518

mountains, desert, sky is the scene where the label of Male is most likely to be picked over that of others

(att_siz) Distance from center is different between the attributes with a p-value of 0.008 for the most significant pair (Female and Male), distribution shown below

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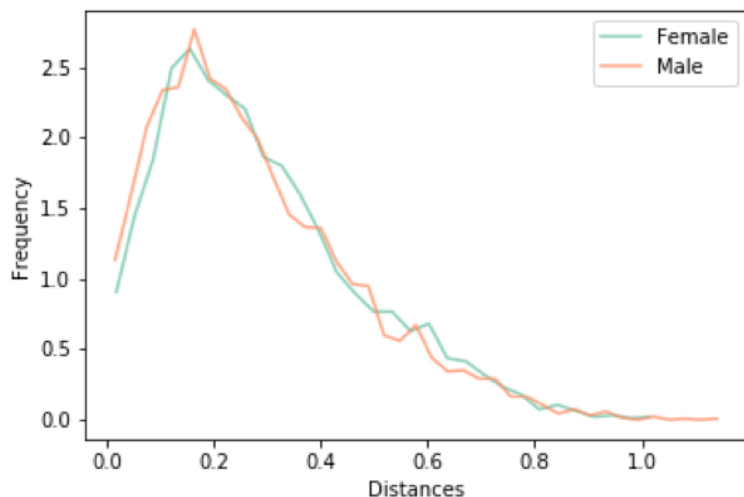
(att_cnt) Objects that are most statistically significantly represented with one attribute over the other.
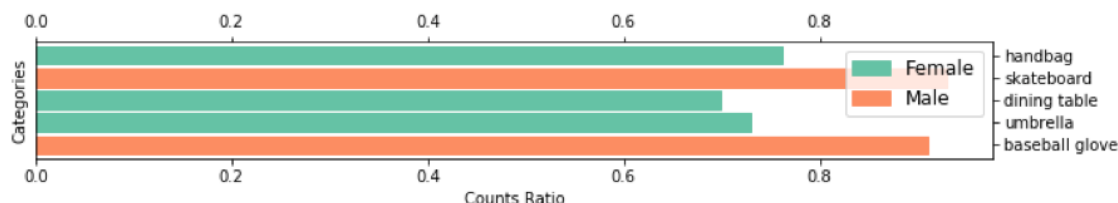
(att_dis) Qualitative example of handbag, which has the biggest ratio in distance between object and person (which can be interpreted as a proxy for interaction) between the attributes. Female are closer than any other attribute. There is a red box around the person, and blue box around the object.

FEMALE (Top, Closer) vs NOT-FEMALE (Bottom, Further)
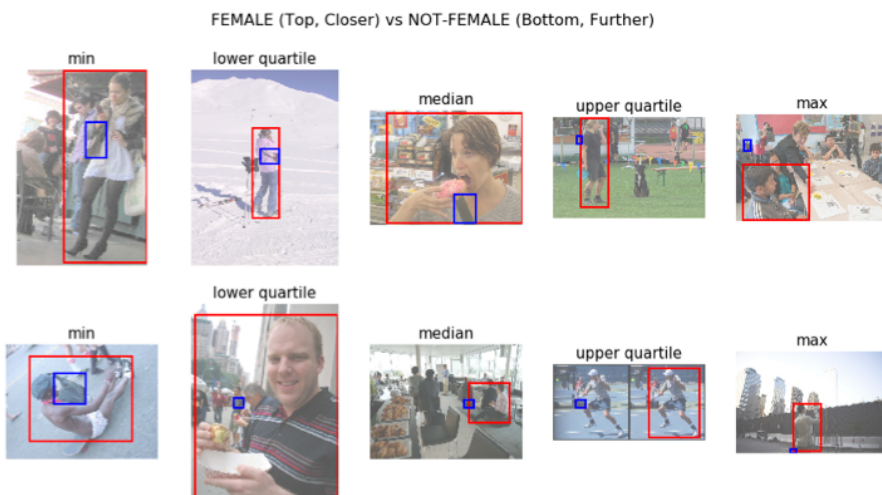
We can see that it does appear to be the case that when a male is pictured with a handbog, he is less likely to actually be interacting with it, whereas when a female is pictured with a handbag, she is actually interacting with it.

Some of the other metrics in the notebook

- (att_cnt) Cooccurrence differences of objects between attributes
- (att_clu) Scene differences per object between attributes