

Part 1

1 c iii Do we need to write vectors \mathbf{eHat} and \mathbf{Yhat} in full in the report?

1 c viii What are the degrees of freedom of the F-statistic in question? Is it not $\dim X = 2$?

1 f we can;t test it because there exists no reduced model for $\mathbf{Y} = \mathbf{X}_0 * \beta_0$

2 a I do we need to center the data beforehand? Do we call it $ttest(\mathbf{Y}_0, \mathbf{Y}_1)$? That gives the same statistic as in the prev question $t = -6.99$, but it should be different because this is a paired t-test

Part 2

1 d iii do we check duplicates in the actual permutations or in the t-values? If two permutations have $G_0 = \{3 \ 1 \ 2 \ 9 \ 4 \ 7\}$ and $G_0 = \{1 \ 3 \ 2 \ 9 \ 4 \ 7\}$, do we consider them to be duplicates or not?

2 b For each permutation, do we compute the t-values for all voxels in the image ($40 \times 40 \times 40$ t-values) and then find the t-max? And then repeat the process for all the 12,000 t-maxes?

2 d. the answer is just one number corresponding to the t-threshold among the 12,000 t-max values, right? That is, $t_threshold = \text{sorted_tmax}(12,000 * 95/100)$

2. c how do we correct the p-value for multiple comparisons? Maybe $p = p / 12,000$?