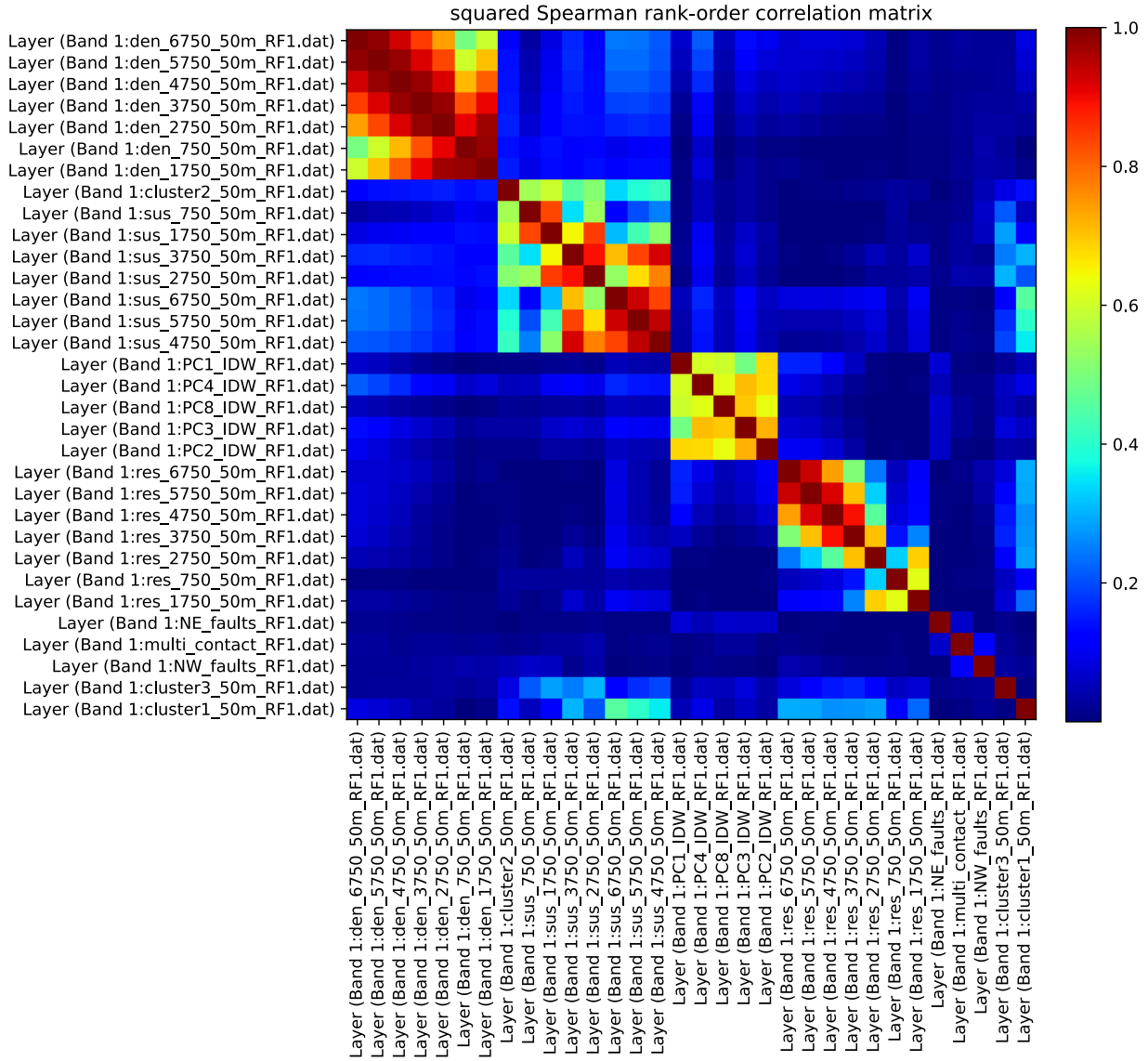
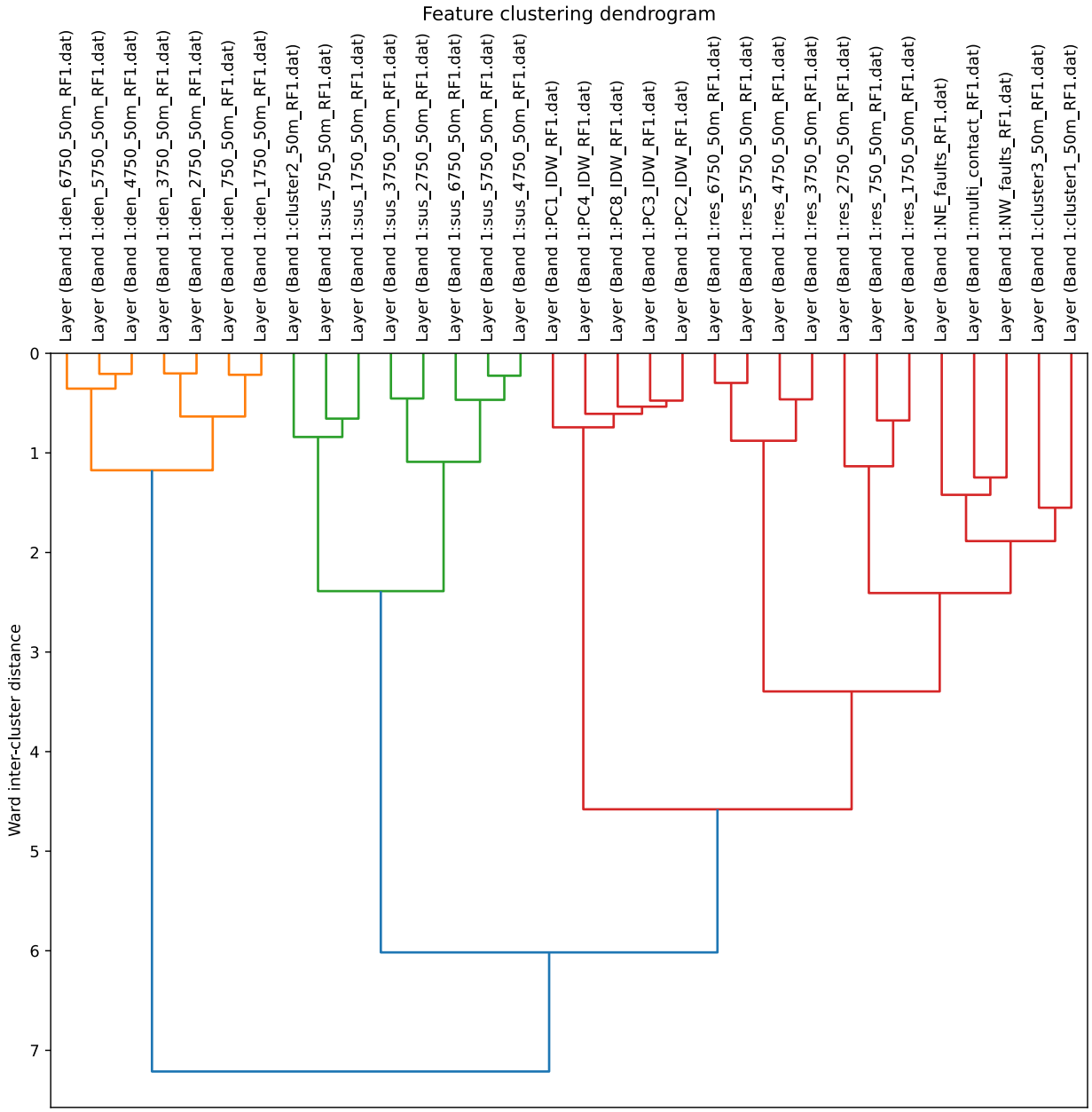
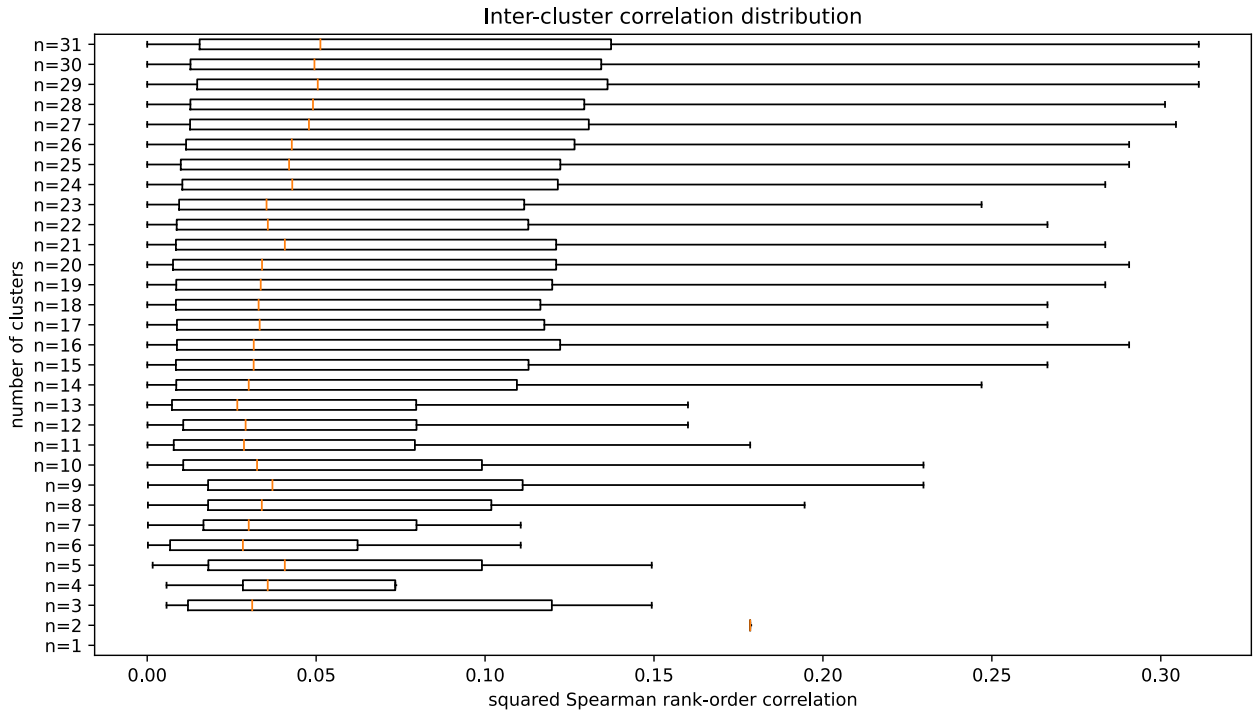
Hierarchical feature clustering

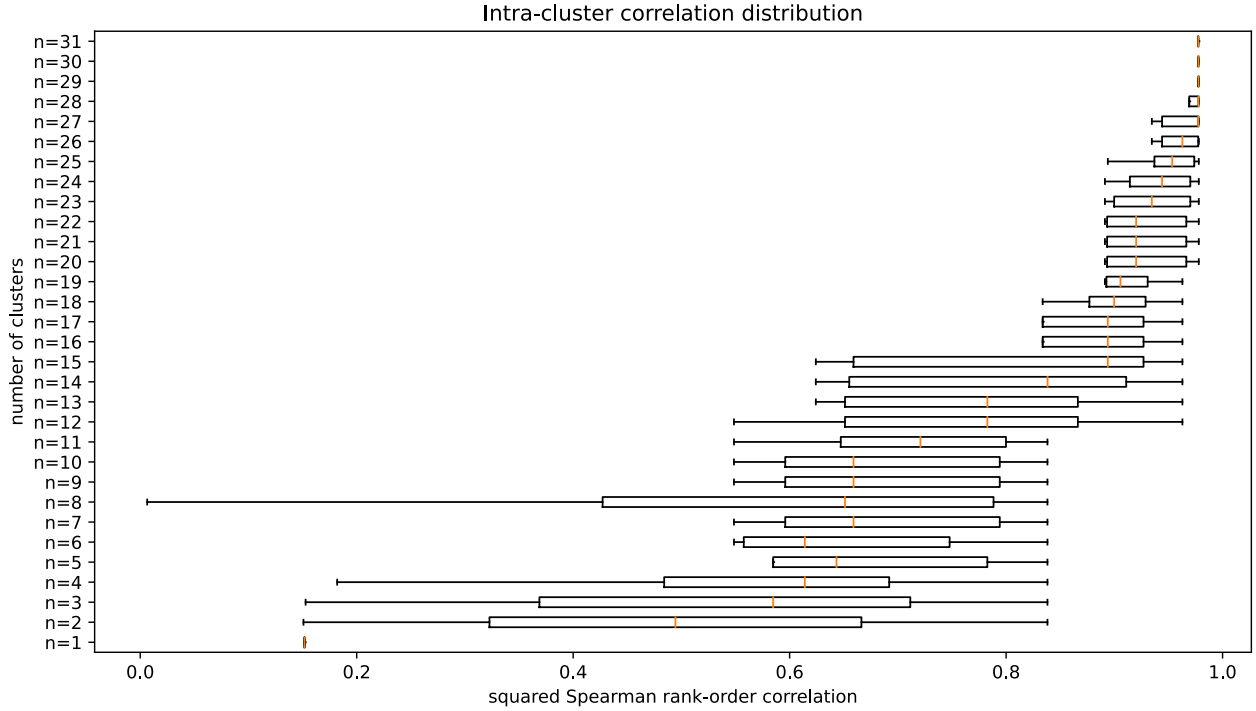
Linkage methode: Ward (see scipy.cluster.hierarchy.ward)

Distance metric: squared Spearman rank-order correlation (see scipy.stats.spearmanr)




Feature clustering dendrogram
Layer (Band 1:den_6750_50m_RF1.dat)
Layer (Band 1:den_5750_50m_RF1.dat)
Layer (Band 1:den_4750_50m_RF1.dat)
Layer (Band 1:den_3750_50m_RF1.dat)
Layer (Band 1:den_2750_50m_RF1.dat)
Layer (Band 1:den_750_50m_RF1.dat)
Layer (Band 1:den_1750_50m_RF1.dat)
Layer (Band 1:cluster2_50m_RF1.dat)
Layer (Band 1:sus_750_50m_RF1.dat)
Layer (Band 1:sus_1750_50m_RF1.dat)
Layer (Band 1:sus_3750_50m_RF1.dat)
Layer (Band 1:sus_2750_50m_RF1.dat)
Layer (Band 1:sus_6750_50m_RF1.dat)
Layer (Band 1:sus_5750_50m_RF1.dat)
Layer (Band 1:sus_4750_50m_RF1.dat)
Layer (Band 1:PC1_IDW_RF1.dat)
Layer (Band 1:PC4_IDW_RF1.dat)
Layer (Band 1:PC8_IDW_RF1.dat)
Layer (Band 1:PC3_IDW_RF1.dat)
Layer (Band 1:PC2_IDW_RF1.dat)
Layer (Band 1:res_6750_50m_RF1.dat)
Layer (Band 1:res_5750_50m_RF1.dat)
Layer (Band 1:res_4750_50m_RF1.dat)
Layer (Band 1:res_3750_50m_RF1.dat)
Layer (Band 1:res_2750_50m_RF1.dat)
Layer (Band 1:res_750_50m_RF1.dat)
Layer (Band 1:res_1750_50m_RF1.dat)
Layer (Band 1:NE_faults_RF1.dat)
Layer (Band 1:multi_contact_RF1.dat)
Layer (Band 1:NW_faults_RF1.dat)
Layer (Band 1:cluster3_50m_RF1.dat)
Layer (Band 1:cluster1_50m_RF1.dat)
Ward inter-cluster distance
0
1
2
3
4
5
6
7


Inter-cluster correlation distribution
number of clusters
n=31
n=30
n=29
n=28
n=27
n=26
n=25
n=24
n=23
n=22
n=21
n=20
n=19
n=18
n=17
n=16
n=15
n=14
n=13
n=12
n=11
n=10
n=9
n=8
n=7
n=6
n=5
n=4
n=3
n=2
n=1
0.00
0.05
0.10
0.15
0.20
0.25
0.30
squared Spearman rank-order correlation



Selected features (zero-based indices)

n=1	18																													
n=2	3	19																												
n=3	4	10	19																											
n=4	4	10	19	28																										
n=5	4	13	9	19	28																									
n=6	4	13	9	14	19	28																								
n=7	6	3	13	9	14	19	28																							
n=8	6	3	13	9	14	19	22	28																						
n=9	6	3	13	9	14	19	22	24	28																					
n=10	6	3	13	9	30	19	22	24	28	31																				
n=11	6	3	13	9	14	19	22	24	28	30	31																			
n=12	6	3	13	9	14	20	17	22	24	28	30	31																		
n=13	6	3	7	9	12	14	20	17	22	24	28	30	31																	
n=14	6	2	4	7	9	12	14	20	17	22	24	28	30	31																
n=15	6	2	4	7	9	10	12	14	20	17	22	24	28	30	31															
n=16	6	2	4	7	9	10	12	14	20	17	22	23	24	28	30	31														
n=17	6	2	4	7	9	10	12	14	20	17	22	23	24	27	29	30	31													
n=18	6	2	4	7	9	10	12	13	14	20	17	22	23	24	27	29	30	31												
n=19	0	2	4	6	7	9	10	12	13	14	20	17	22	23	24	27	29	30	31											
n=20	0	2	4	6	7	9	10	12	13	14	21	17	19	22	23	24	27	29	30	31										
n=21	0	2	4	6	7	9	10	12	13	14	21	17	19	22	23	24	27	26	29	30	31									
n=22	0	2	4	6	7	9	10	12	13	14	21	17	19	22	23	24	25	26	27	29	30	31								
n=23	0	2	4	6	7	9	10	12	13	14	21	17	19	22	23	24	25	26	27	28	29	30	31							
n=24	0	1	2	4	6	7	9	10	12	13	14	21	17	19	22	23	24	25	26	27	28	29	30	31						

n=25	0	1	2	4	6	7	9	10	11	12	13	14	21	17	19	22	23	24	25	26	27	28	29	30	31	
n=26	0	1	2	4	5	6	7	9	10	11	12	13	14	21	17	19	22	23	24	25	26	27	28	29	30	31
n=27	0	1	2	4	5	6	7	9	10	11	12	13	14	21	16	17	19	22	23	24	25	26	27	28	29	30
n=28	0	1	2	4	5	6	7	8	9	10	11	12	13	14	21	16	17	19	22	23	24	25	26	27	28	29
n=29	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	21	16	17	19	22	23	24	25	26	27	28
n=30	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	21	22	23	24	25	26	27
n=31	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	22	23	24	25	26

Report design was inspired by Permutation Importance with Multicollinear or Correlated Features.