

Ephys data: First look

Mohorianu Lab

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Meeting

Data overview

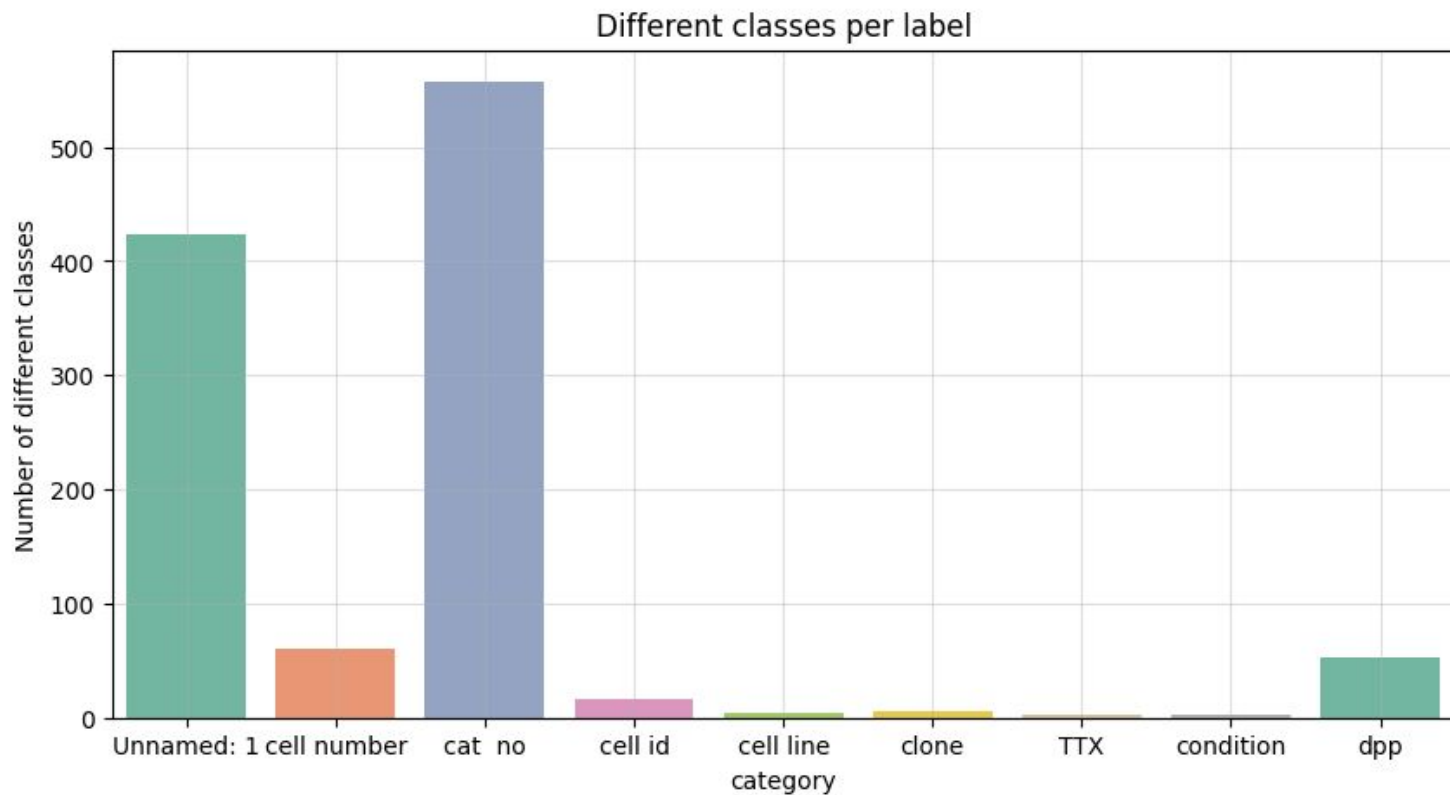
	cell file	Unnamed: 1	cell number	cat no	cell id	cell line	clone	TTX	condition	dpp	...	Most AP Mean Threshold to Peak, S	Most AP Mean AP Width, S	Most AP Event number	Most AP Frequency, Hz	Most AP Mean Spike Height, mV
0	cell1_0509_0000.abf	509_cell1_LV	509	30	cell1	LV	0	0	con	7	...	0.004967	0.003993	3.0	15.0	61.543784
1	cell2_0509_0000.abf	509_cell2_LV	509	32	cell2	LV	0	0	con	7	...	0.004780	0.003800	3.0	15.0	64.097088
2	cell3_0509_0000.abf	509_cell3_LV	509	35	cell3	LV	0	0	con	7	...	0.004653	0.003553	3.0	15.0	58.970135
3	cell4_0509_0000.abf	509_cell4_LV	509	493	cell4	LV	0	0	con	7	...	NaN	NaN	NaN	NaN	NaN
4	cell5_0509_0000.abf	509_cell5_LV	509	36	cell5	LV	0	0	con	7	...	0.007507	0.004607	3.0	15.0	51.717124
...
568	cell1_2709709_0007.abf	2709709_cell1_LV	2709709	375	cell1	LV	0	0	con	29	...	0.004000	0.005160	2.0	10.0	58.547975
569	cell3_2709709_0013.abf	2709709_cell3_LV	2709709	377	cell3	LV	0	0	con	29	...	0.004430	0.004140	2.0	10.0	66.146852
570	cell4_2709709_0007.abf	2709709_cell4_LV	2709709	379	cell4	LV	0	0	con	29	...	0.003570	0.005840	2.0	10.0	36.193848
571	cell8_2709709_0006.abf	2709709_cell8_LV	2709709	382	cell8	LV	0	0	con	29	...	0.003680	0.004320	1.0	5.0	41.320802
572	cell8_2709709_0018.abf	2709709_cell8_LV	2709709	383	cell8	LV	0	0	con	29	...	0.004340	0.005960	1.0	5.0	35.064698

573 rows × 61 columns

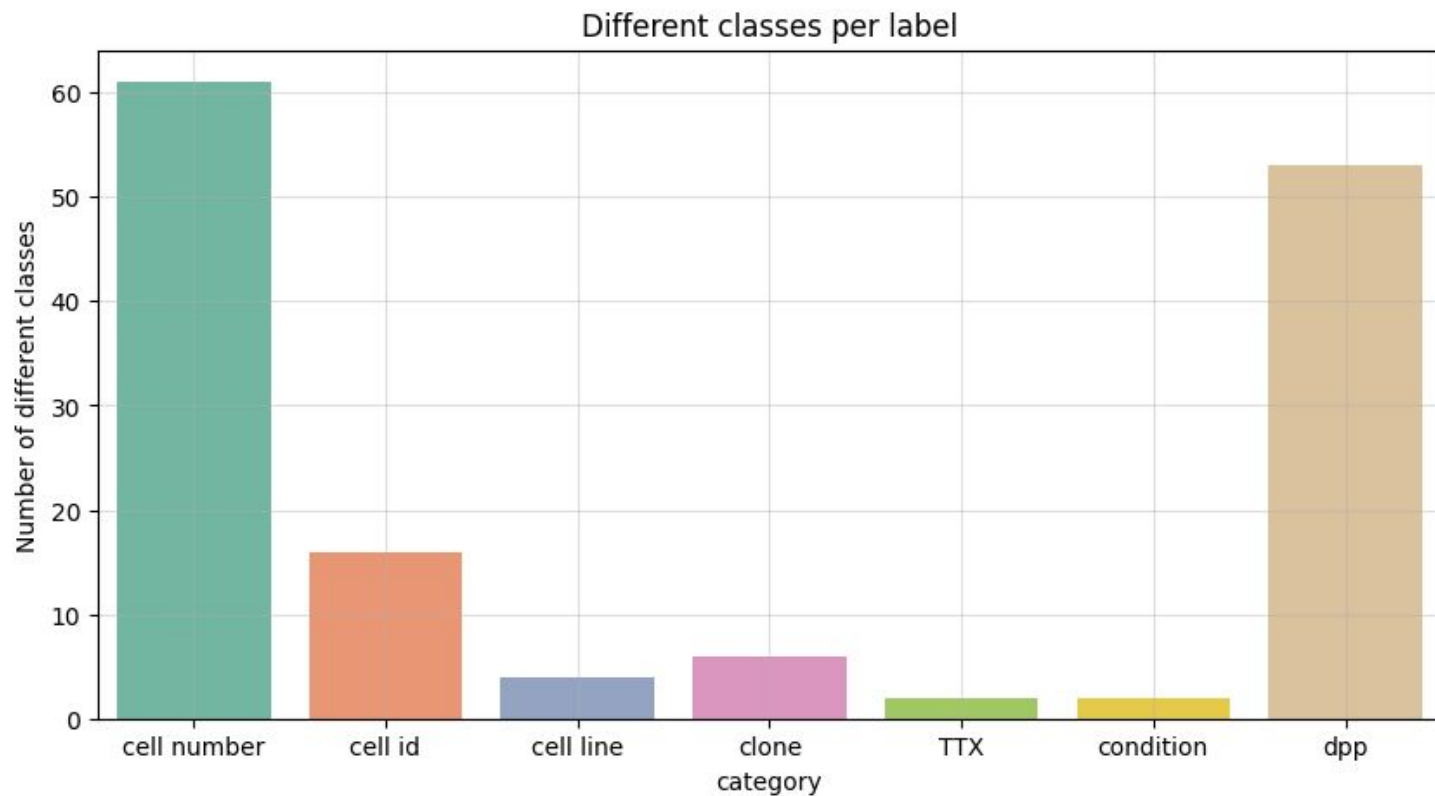
Labels

	Unnamed: 1	cell number	cat no	cell id	cell line	clone	TTX	condition	dpp
0	509_cell1_LV	509	30	cell1	LV	0	0	con	7
1	509_cell2_LV	509	32	cell2	LV	0	0	con	7
2	509_cell3_LV	509	35	cell3	LV	0	0	con	7
3	509_cell4_LV	509	493	cell4	LV	0	0	con	7
4	509_cell5_LV	509	36	cell5	LV	0	0	con	7
...
568	2709709_cell1_LV	2709709	375	cell1	LV	0	0	con	29
569	2709709_cell3_LV	2709709	377	cell3	LV	0	0	con	29
570	2709709_cell4_LV	2709709	379	cell4	LV	0	0	con	29
571	2709709_cell8_LV	2709709	382	cell8	LV	0	0	con	29
572	2709709_cell8_LV	2709709	383	cell8	LV	0	0	con	29

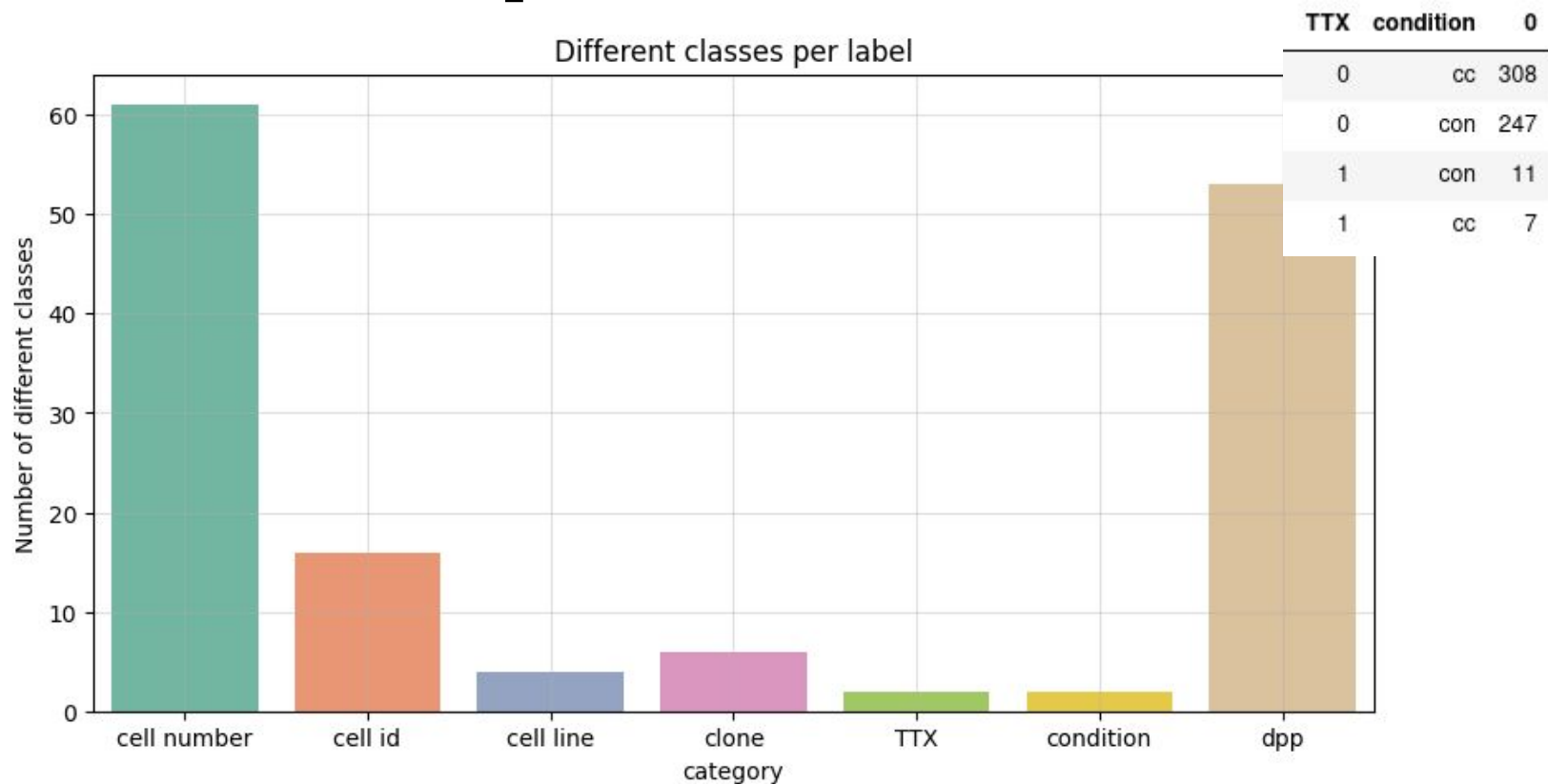
Number of classes per label



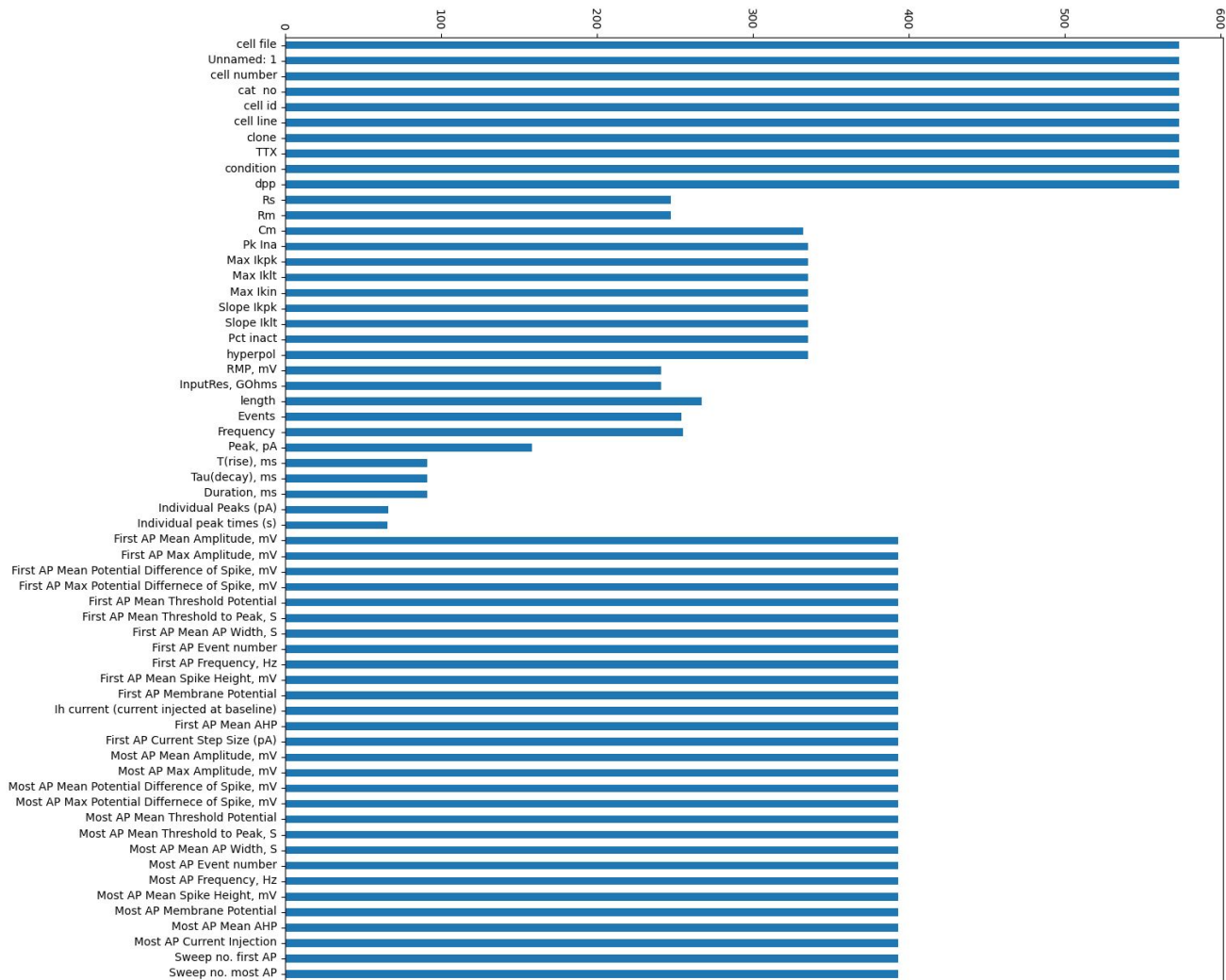
Number of classes per label

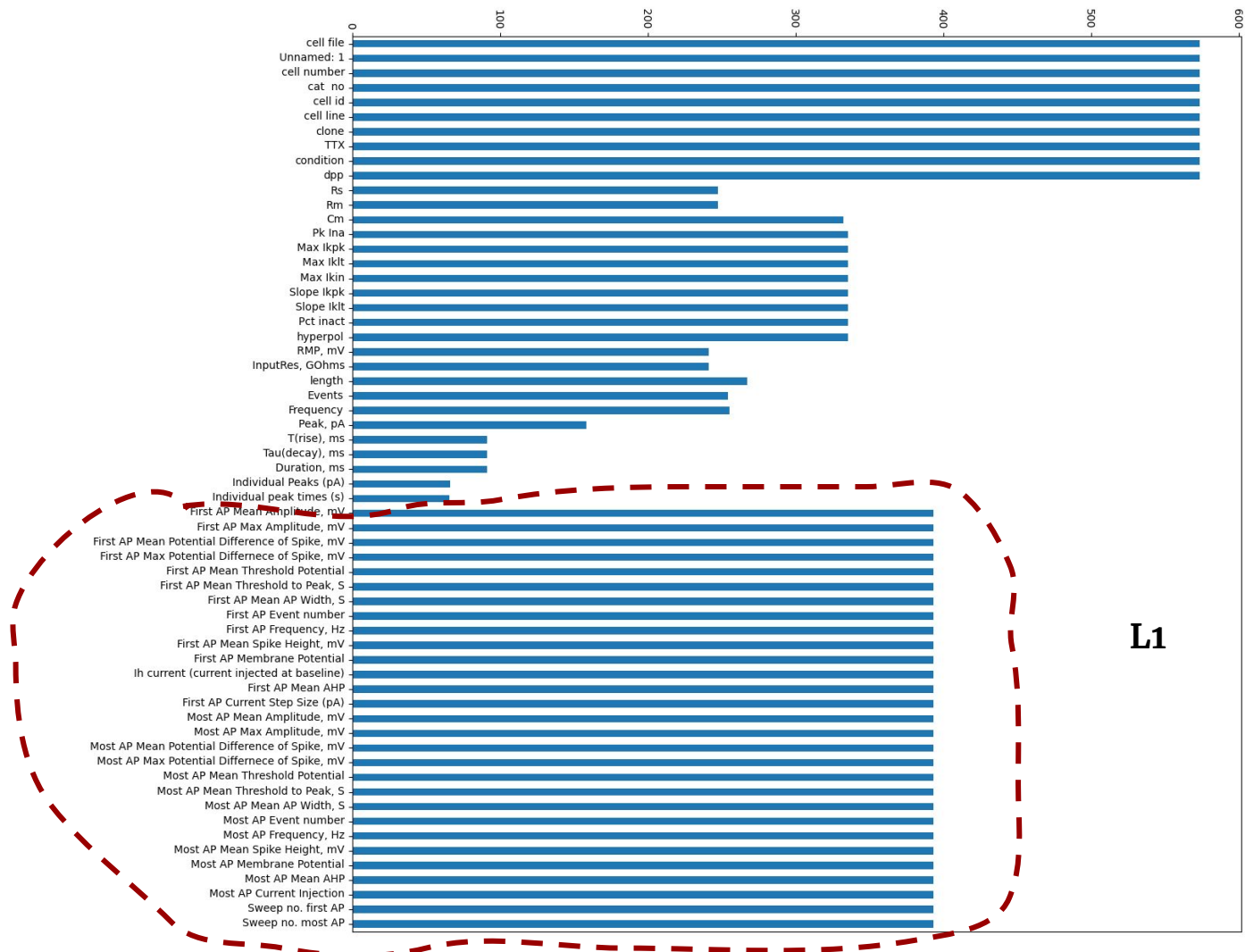


Number of classes per label

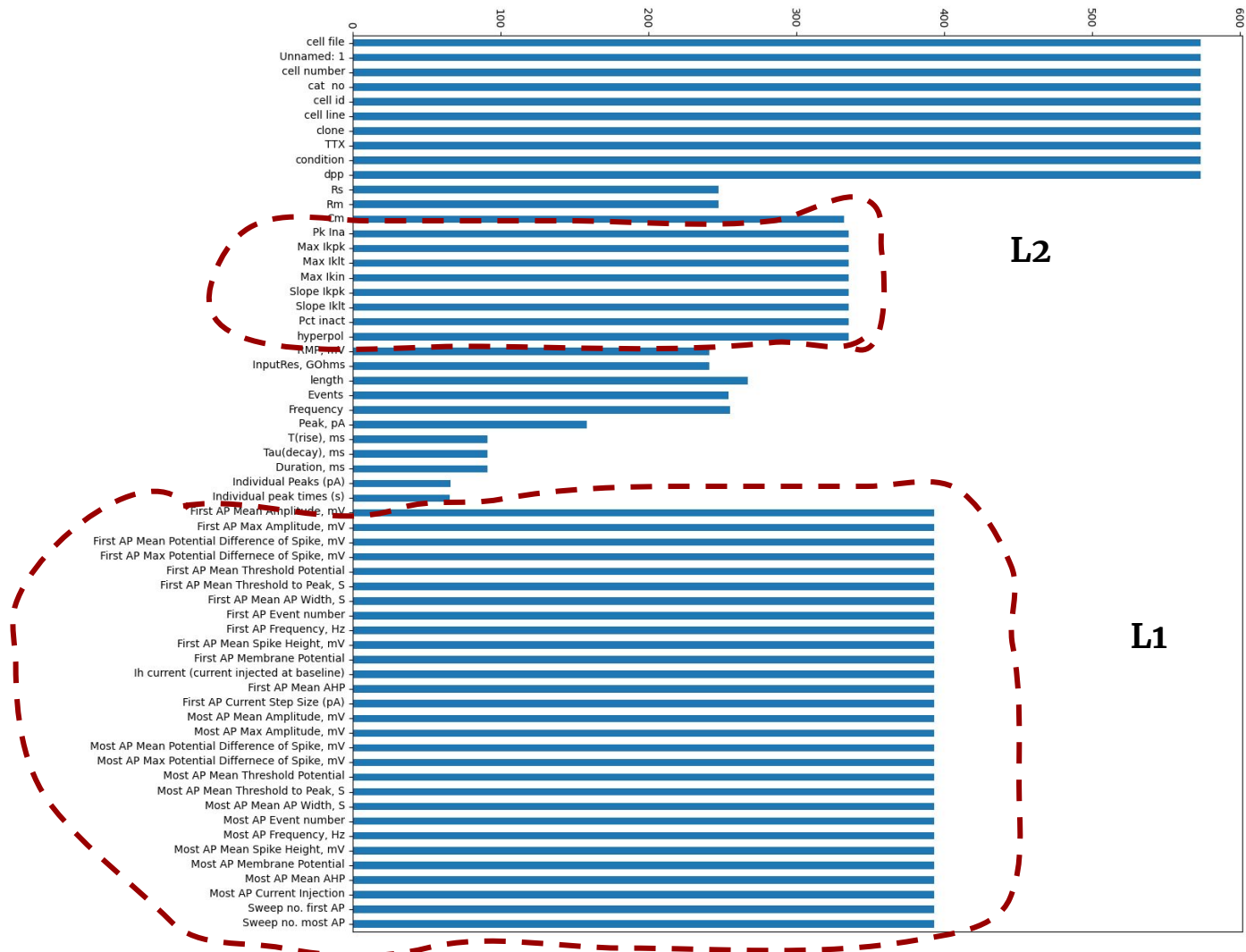


Number of non-zeros per feature



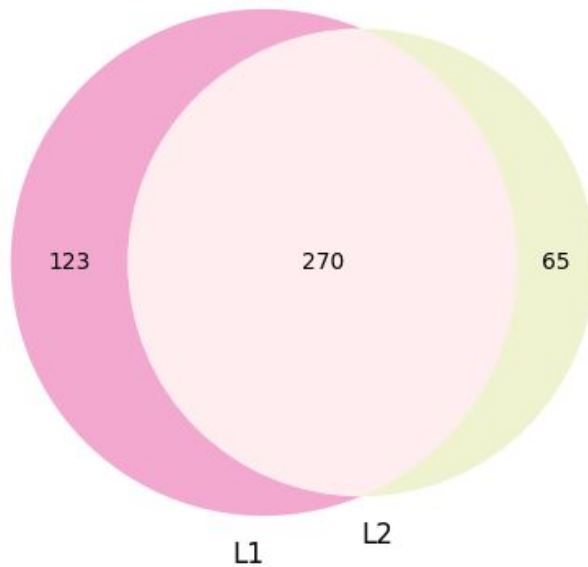


L1



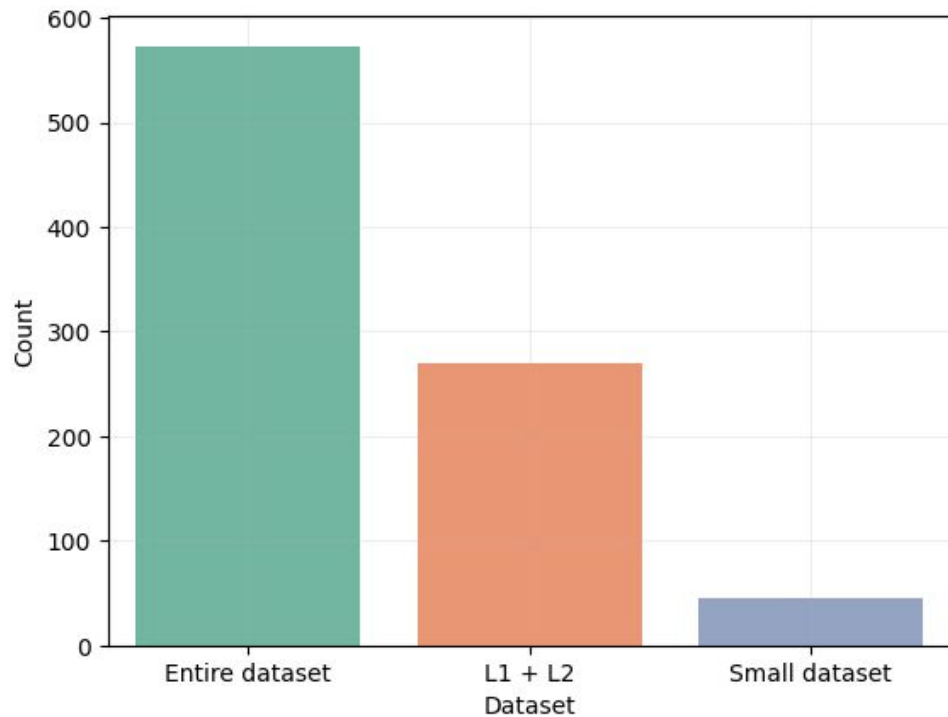
Elements from both L1 and L2

Number of present elements from L1 and L2

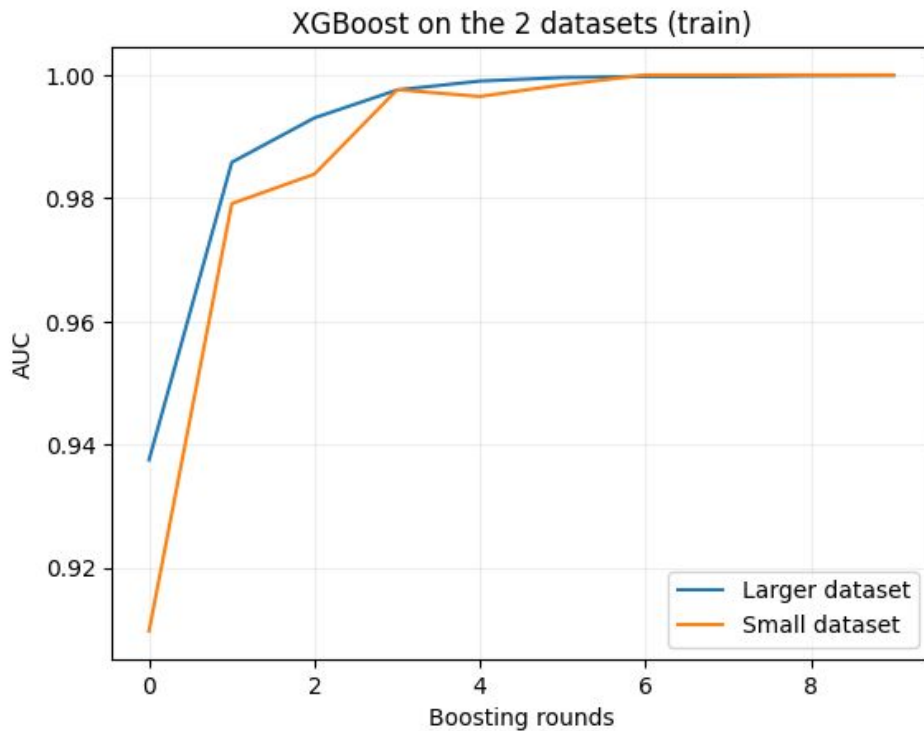


$$270/573 = 0.47$$

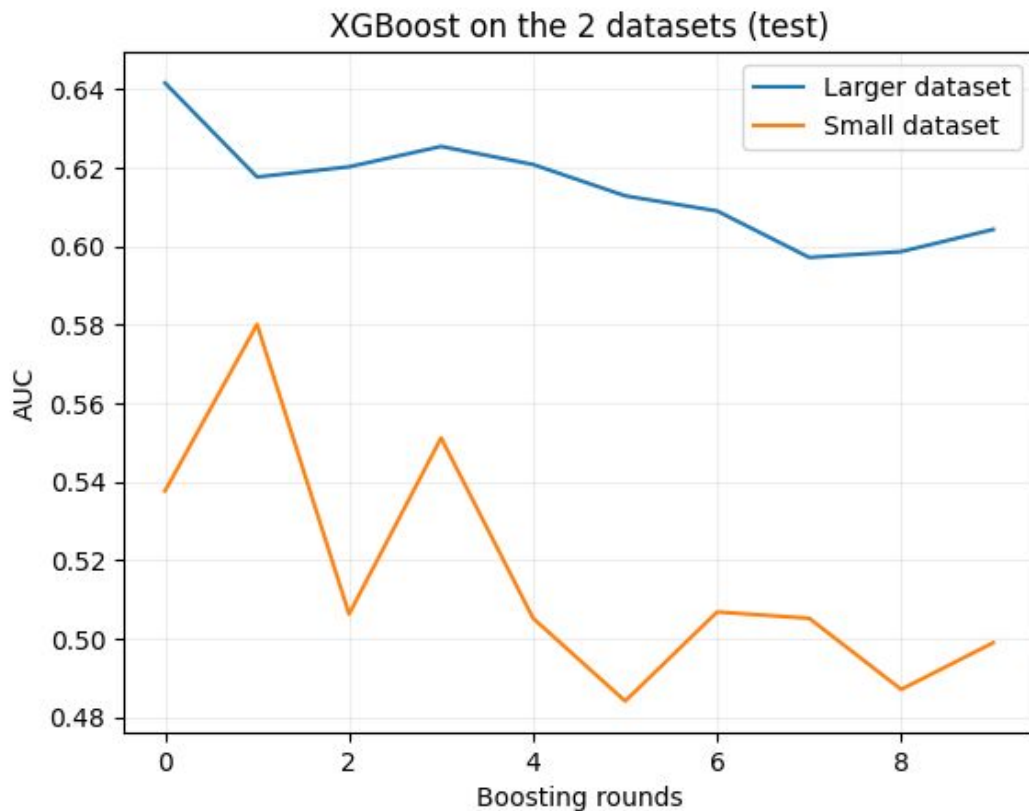
Number of elements for different filtering



XGBoost performs better on the larger dataset



XGBoost performs better on the larger dataset



Feature importances based on the new data/model

