Evaluation Configuration:

Embedding Folder: 'gte_large_2025-02-23_256_categories_100_l2_unit'.

Embedding Info: Dense with 356 Dimensions.

Database: 'backup_2025_02_23' (Backup Date: 2025-02-23).

Time Elapsed: 2.39 Minutes.

Alogrithm: Logistic Regression.

Logistic Regression Solver: Lbfgs.

Maximum Number of Optimization iterations: 10000.

Evaluation Method: Cross-Validation.

Number of Cross-Validation Folds: 5.

Were the Training Sets stratified? Yes.

Random State: 42.

Weights: GLOBAL:CACHE_V.

Training Data includes Base: No.

Training Data includes Cache: Yes.

Cache Type: User-filtered with a maximum number of 5K papers.

Number of Negative Samples per User: 100.

Minimum Number of required negative Votes per User: 20.

Minimum Number of required positive Votes per User: 20.

Number of selected Users: 500.

User Selection Criterion among those who qualified: Random.

Hyperparameters Ranges:

weights_neg_scale:
[8.0].

weights_cache_v:
[0.8].

clf_C:
[0.1].

Users Info (N = 500):

	Minimum	Maximum	Median	Mean	Standard Dev.
Voting Weight	nan	nan	nan	nan	nan
Number of positively rated Papers	20	1016	41.0	67.356	95.0814
Number of negatively rated Papers	20	8559	34.0	67.494	384.393
Number of base Papers	nan	nan	nan	nan	nan
Percentage of positively rated among all rated	0.0964	0.9482	0.5337	0.5372	0.1506
Percentage of positively rated + base among all rated + base + zerorated	0.0964	0.9482	0.5337	0.5372	0.1506

[36, 46, 55, 60, 70, 78, 82, 88, 107, 116, 146, 169, 172, 189, 219, 244, 266, 289, 300, 338, 345, 348, 425, 454, 473, 508, 601, 608, 633, 766, 801, 874, 982, 1011, 1064, 1069, 1162, 1399, 1477, 1496, 1512, 1539, 1556, 1575, 1626, 1698, 1776, 1798, 2006, 2016, 2171, 2195, 2263, 2456, 2468, 2475, 2606, 2673, 2706, 2930, 2959, 2990, 3021, 3075, 3194, 3247, 3299, 3507, 3534, 3539, 3556, 3577, 3607, 3622, 3646, 3679, 3686, 3693, 3716, 3721, 3735, 3867, 3897, 3929, 3931, 3967, 3970, 3992, 4018, 4043, 4048, 4091, 4124, 4134, 4169, 4180, 4204, 4260, 4273, 4300, 4345, 4390, 4411, 4417, 4419, 4467, 4469, 4478, 4490, 4498, 4500, 4536, 4557, 4562, 4578, 4580, 4582, 4596, 4601, 4643, 4671, 4727, 4757, 4758, 4844, 4894, 4964, 4982, 5011, 5054, 5069, 5113, 5136, 5150, 5155, 5202, 5211, 5224, 5228, 5232, 5320, 5400, 5424, 5464, 5471, 5499, 5504, 5584, 5593, 5641, 5667, 5721, 5736, 5768, 5773, 5778, 5871, 5909, 5914, 6023, 6031, 6065, 6258, 6343, 6395, 6488, 6493, 6524, 6538, 6559, 6563, 6584, 6711, 6827, 6828, 6933, 6934, 6940, 6963, 7025, 7035, 7089, 7260, 7300, 7316, 7340, 7365, 7376, 7404, 7406, 7517, 7532, 7599, 7600, 7658, 7684, 7727, 7741, 7834, 7846, 7873, 7891, 7926, 8030, 8040, 8043, 8095, 8157, 8201, 8215, 8263, 8331, 8375, 8442, 8481, 8536, 8602, 8667, 8760, 8843, 8883, 8899, 8972, 9007, 9104, 9112, 9122, 9176, 9237, 9286, 9414, 9482, 9487, 9508, 9522, 9529, 9655, 9713, 9736, 9772, 9857, 9873, 9917, 9922, 9952, 10034, 10061, 10153, 10172, 10218, 10235, 10250, 10349, 10360, 10412, 10464, 10475, 10502, 10563, 10573, 10605, 10642, 10655, 10692, 10747, 10756, 10861, 10901, 10915, 10948, 10955, 11024, 11087, 11148, 11162, 11230, 11243, 11253, 11267, 11330, 11354, 11415, 11481, 11488, 11573, 11667, 11705, 11722, 11763, 11798, 11804, 11816, 11921, 11928, 12012, 12127, 12159, 12208, 12225, 12256, 12267, 12315, 12345, 12368, 12407, 12430, 12464, 12494, 12596, 12649, 12713, 12775, 12829, 12937, 12962, 12966, 13192, 13195, 13327, 13409, 13570, 13638, 13759, 13823, 13899, 13924, 14041, 14166, 14174, 14210, 14359, 14562, 14719, 14777, 14803, 14851, 14894, 14931, 14979, 15041, 15099, 15191, 15231, 15244, 15291, 15307, 15369, 15405, 15426, 15445, 15473, 15509, 15558, 15585, 15641, 15708, 15793, 15974, 15977, 15995, 16006, 16054, 16089, 16090, 16174, 16190, 16326, 16328, 16342, 16371, 16419, 16482, 16515, 16529, 16699, 16723, 16853, 16883, 16895, 17050, 17087, 17279, 17306, 17310, 17333, 17350, 17361, 17411, 17485, 17541, 17571, 17576, 17595, 17597, 17600, 17615, 17684, 17691, 17761, 17770, 17839, 17849, 17877, 17882, 17910, 17916, 17931, 17970, 18032, 18039, 18069, 18089, 18127, 18178, 18362, 18420, 18433, 18455, 18513, 18514, 18520, 18554, 18643, 18705, 18836, 18854, 18890, 18920, 18948, 19141, 19169, 19226, 19251, 19253, 19261, 19263, 19377, 19383, 19394, 19412, 19449, 19473, 19487, 19489, 19556, 19565, 19590, 19806, 19826, 19912, 20027, 20074, 20077, 20094, 20216, 20259, 20386, 20390, 20443, 20570, 20645, 20672, 20675, 21205, 21207, 21232, 21267, 21282, 21394, 21404, 21432, 21454, 21764, 21766, 21815, 21869, 21873, 21899, 21902, 21938, 21956, 21961, 22008, 22068, 22129, 22140, 22250, 22255, 22343, 22357, 22376, 22429, 22564, 22661, 22706, 22716, 22763, 22772, 22934, 22959]

Validation Scores for Hyperparameters Combinations:

S	v	C	REC	SPE	BAL	CEL	NDCG	MRR	NDCG Smpl	MRR Smpl	NDCG All	MRR All	INCE All
N/A	**N/A**	**N/A**	**0.8172**	**0.7352**	**0.7762**	**0.4755**	**0.8553**	**0.8063**	**0.9872**	**0.9834**	**0.8502**	**0.8002**	**0.9394**
8.0	0.8	0.1	0.8172	0.7352	0.7762	0.4755	0.8553	0.8063	0.9872	0.9834	0.8502	0.8002	0.9394

1/2 - Scores of the Best Global Combi 0 (S = 8.0, v = 0.8, C = 0.1):

Score	All	All_T	All_σ	HiVote	HiVote_T	LoVote	LoVote_T	HiPosi	HiPosi_T	LoPosi	LoPosi_T	Tail	Tail_T
PGTRo	0.5372	0.5372	0.1506	0.5732	0.5732	0.4994	0.4993	0.8045	0.8045	0.2689	0.2689	0.5301	0.53
PPRRo	0.5644	0.6169	0.1526	0.5727	0.5999	0.5807	0.6133	0.7554	0.8177	0.3477	0.3649	0.5847	0.7039
TPRo	0.4445	0.5311	0.1528	0.4779	0.534	0.4179	0.4993	0.7079	0.7826	0.1991	0.2659	0.333	0.5146
FPRo	0.1199	0.0858	0.082	0.0948	0.0659	0.1628	0.114	0.0475	0.0351	0.1486	0.099	0.2517	0.1892
TNRo	0.3429	0.377	0.1468	0.332	0.3608	0.3377	0.3867	0.148	0.1605	0.5825	0.6321	0.2182	0.2808
FNRo	0.0927	0.0061	0.0591	0.0954	0.0392	0.0815	0.0	0.0966	0.0218	0.0698	0.003	0.1971	0.0154
ACC	0.7874	0.9081	0.0956	0.8098	0.8948	0.7556	0.886	0.8558	0.9431	0.7816	0.8981	0.5512	0.7954
REC	0.8172	0.9892	0.1225	0.7954	0.9222	0.8323	1.0	0.8786	0.9741	0.7359	0.9805	0.6165	0.9772
SPE	0.7352	0.809	0.1658	0.7605	0.8325	0.6715	0.7691	0.7578	0.823	0.7941	0.8627	0.4585	0.5887
BAL	0.7762	0.8991	0.097	0.778	0.8773	0.7519	0.8846	0.8182	0.8986	0.765	0.9216	0.5375	0.7829
PRE	0.7886	0.8578	0.1451	0.7867	0.8592	0.7346	0.8287	0.9385	0.9575	0.6076	0.7451	0.5345	0.74
CEL	0.4755	0.2281	0.1872	0.419	0.276	0.5335	0.2356	0.3613	0.1877	0.4453	0.2382	0.9273	0.3901
CELP	0.4664	0.1131	0.2952	0.4789	0.2577	0.4789	0.0631	0.3308	0.1452	0.6047	0.1404	0.9584	0.1513
CELN	0.5251	0.3696	0.2944	0.4708	0.3524	0.6083	0.4125	0.4923	0.3534	0.3928	0.2822	0.9292	0.6596
AUC_C	0.8602	0.9815	0.0927	0.864	0.9515	0.8402	0.9938	0.9036	0.973	0.8546	0.987	0.6405	0.9631
NDCG	0.8553	0.9447	0.0888	0.8508	0.9004	0.8365	0.9697	0.8934	0.9337	0.8509	0.9616	0.6985	0.9096
MRR	0.8063	0.9253	0.1184	0.8003	0.8661	0.7816	0.959	0.8568	0.9105	0.8004	0.9482	0.6001	0.8786
HR@1	0.6728	0.8598	0.1904	0.6616	0.7587	0.6392	0.9204	0.7472	0.8314	0.661	0.9004	0.4021	0.785
INCE	0.8864	0.3958	0.5081	0.8886	0.6054	0.954	0.3184	0.6873	0.4365	0.8646	0.3104	1.8322	0.6694

Legend: All: All 500 Users | HiVote/LoVote: The 50 Users with the highest/lowest number of positively + negatively rated Papers
HiPosi/LoPosi: The 50 Users with the highest/lowest ratio of positively to negatively rated Papers | Tail: The 15 Users with the worst Validation Performance on the Score in the grey Row.

Score	All	All_T	All_σ	HiVote	HiVote_T	LoVote	LoVote_T	HiPosi	HiPosi_T	LoPosi	LoPosi_T	Tail	Tail_T
C_ALL	0.533	0.5882	0.1272	0.5444	0.5652	0.5368	0.596	0.6998	0.7506	0.3478	0.3763	0.5393	0.6435
C_TP	0.8502	0.9062	0.0516	0.8266	0.8418	0.8499	0.9398	0.8783	0.8935	0.8066	0.892	0.7956	0.8866
C_FP	0.6944	0.6809	0.0824	0.7077	0.6791	0.6838	0.6733	0.6795	0.6782	0.6909	0.6647	0.7239	0.68
C_TN	0.1251	0.1287	0.0723	0.1359	0.1415	0.1376	0.1381	0.1201	0.1221	0.1107	0.116	0.1983	0.2019
C_FN	0.3218	0.4812	0.0854	0.2838	0.3815	0.3669	0.5	0.2937	0.4239	0.3062	0.4877	0.2807	0.4854
PGTAT 0.05	0.9746	0.9998	0.0464	0.9846	0.9985	0.9632	1.0	0.9861	0.9996	0.9732	0.9993	0.909	0.9994
SAT 0.05	0.0035	0.0035	0.01	0.0053	0.0053	0.0031	0.0031	0.0027	0.0027	0.0044	0.0044	0.0155	0.0155
SPE Smpl	0.9999	0.9999	0.0012	1.0	1.0	0.9997	0.9997	1.0	1.0	0.9996	0.9996	0.9995	0.9995
PRE Smpl	0.9952	0.9995	0.051	1.0	1.0	0.9722	0.9982	1.0	1.0	0.9889	0.9985	0.9333	0.997
C_ALL Smpl	0.0015	0.0015	0.0023	0.002	0.002	0.0013	0.0013	0.0014	0.0014	0.0019	0.0019	0.004	0.004
C_T1 Smpl	0.0385	0.0385	0.0915	0.0557	0.0557	0.0419	0.0419	0.0314	0.0314	0.0634	0.0634	0.086	0.086
NDCG Smpl	0.9872	0.9989	0.0438	0.9886	0.9988	0.9787	0.9969	0.994	0.9996	0.9799	0.9952	0.921	0.9857
NDCG All	0.8502	0.9437	0.0933	0.8479	0.9	0.8266	0.9665	0.8915	0.9335	0.8407	0.957	0.6643	0.8981
MRR Smpl	0.9834	0.9985	0.0563	0.985	0.9984	0.973	0.9958	0.9922	0.9994	0.9733	0.9936	0.901	0.9809
MRR All	0.8002	0.9241	0.1233	0.7968	0.8656	0.7699	0.9548	0.8547	0.9103	0.7873	0.9419	0.5612	0.8632
HR@1 Smpl	0.9754	0.9973	0.0809	0.9755	0.9971	0.9651	0.9915	0.9885	0.9991	0.957	0.9885	0.8782	0.9645
HR@1 All	0.6674	0.8576	0.1935	0.6602	0.7582	0.6308	0.9119	0.7457	0.8313	0.6464	0.8893	0.3786	0.7567
INCE Smpl	0.1578	0.0292	0.3274	0.1826	0.0837	0.2139	0.0235	0.0988	0.0314	0.2323	0.0557	0.7113	0.1394
INCE All	0.9394	0.4138	0.5452	0.9396	0.6426	1.0587	0.3396	0.718	0.4544	0.9618	0.3476	2.1228	0.7556

Legend: All: All 500 Users | HiVote/LoVote: The 50 Users with the highest/lowest number of positively + negatively rated Papers
HiPosi/LoPosi: The 50 Users with the highest/lowest ratio of positively to negatively rated Papers | Tail: The 15 Users with the worst Validation Performance on the Score in the grey Row.

Users with Worst Performance for Best Global Hyperparameters Combination:

User ID	Combi	N_POS	N_NEG	N_BASE	REC	SPE	BAL	CEL	NDCG	MRR	NDCG Smpl	MRR Smpl	NDCG All	MRR All	INCE All
22706	0	20	29	nan	0.55	0.2867	0.4183	0.9741	0.5494	0.4042	1.0	1.0	0.5494	0.4042	2.2699
6493	0	21	32	nan	0.48	0.4381	0.459	0.8216	0.6265	0.5063	1.0	1.0	0.6265	0.5063	1.9776
12966	0	21	27	nan	0.0	1.0	0.5	1.6277	0.6717	0.5638	0.4004	0.2516	0.3401	0.1739	5.1288
19826	0	46	26	nan	0.7378	0.2733	0.5056	0.9987	0.6975	0.6016	0.9727	0.9647	0.6933	0.5973	2.1577
21432	0	23	20	nan	0.84	0.2	0.52	0.7404	0.8506	0.8027	1.0	1.0	0.8506	0.8027	1.386
12829	0	44	21	nan	0.5222	0.56	0.5411	0.9299	0.686	0.583	0.9908	0.9875	0.6843	0.5809	1.9483
16419	0	30	28	nan	0.3	0.7933	0.5467	1.0645	0.7142	0.6178	0.7422	0.6709	0.6207	0.5118	2.4994
20645	0	49	26	nan	0.7156	0.3867	0.5511	0.7394	0.738	0.6519	0.9852	0.98	0.7365	0.6502	1.6408
22357	0	20	22	nan	0.85	0.26	0.555	0.7974	0.6758	0.5667	1.0	1.0	0.6758	0.5667	1.4935
12596	0	21	25	nan	0.66	0.48	0.57	0.8035	0.7044	0.61	1.0	1.0	0.7044	0.61	1.7774
12159	0	46	22	nan	0.8044	0.34	0.5722	0.7134	0.747	0.6653	1.0	1.0	0.747	0.6653	1.7002
36	0	130	63	nan	0.4923	0.6538	0.5731	1.2938	0.6882	0.5854	0.7516	0.6933	0.6152	0.513	2.9483
11230	0	32	22	nan	0.7524	0.4	0.5762	0.8015	0.7243	0.6339	0.972	0.9671	0.7167	0.6276	1.8716
16883	0	26	27	nan	0.9267	0.2467	0.5867	0.8818	0.766	0.6888	1.0	1.0	0.766	0.6888	1.3097
8040	0	43	91	nan	0.6167	0.5591	0.5879	0.7217	0.638	0.5196	1.0	1.0	0.638	0.5196	1.7322
21899	0	20	23	nan	0.9	0.28	0.59	0.615	0.8323	0.775	1.0	1.0	0.8323	0.775	0.8934
9917	0	112	132	nan	0.6059	0.5829	0.5944	0.8113	0.6799	0.5729	0.9822	0.9768	0.6769	0.5698	1.9288
5211	0	89	53	nan	0.9105	0.2891	0.5998	0.7727	0.6868	0.5861	1.0	1.0	0.6868	0.5861	1.7362
22255	0	20	34	nan	0.8	0.4048	0.6024	0.9091	0.7129	0.62	1.0	1.0	0.7129	0.62	1.725
22763	0	43	22	nan	0.8389	0.37	0.6044	0.6998	0.7258	0.6349	1.0	1.0	0.7258	0.6349	1.5826
21956	0	35	41	nan	0.7429	0.4667	0.6048	0.7035	0.6537	0.539	1.0	1.0	0.6537	0.539	1.6862
1512	0	26	23	nan	0.7333	0.48	0.6067	0.7807	0.7098	0.6128	0.981	0.975	0.7074	0.6103	1.6902
8667	0	28	31	nan	0.6267	0.5905	0.6086	0.7552	0.7305	0.6406	1.0	1.0	0.7305	0.6406	1.6845
10655	0	96	45	nan	0.7521	0.4667	0.6094	0.6824	0.8261	0.7688	0.9722	0.9637	0.8219	0.7644	1.1038

Users with Best Performance for Best Global Hyperparameters Combination:

User ID	Combi	N_POS	N_NEG	N_BASE	REC	SPE	BAL	CEL	NDCG	MRR	NDCG Smpl	MRR Smpl	NDCG All	MRR All	INCE All
18836	0	21	24	nan	1.0	1.0	1.0	0.0146	1.0	1.0	1.0	1.0	1.0	1.0	0.0016
19590	0	35	20	nan	1.0	1.0	1.0	0.0623	1.0	1.0	1.0	1.0	1.0	1.0	0.0907
18362	0	49	23	nan	0.9578	1.0	0.9789	0.1563	0.9926	0.99	0.9918	0.9889	0.9844	0.9789	0.0978
10153	0	89	20	nan	0.9542	1.0	0.9771	0.1549	1.0	1.0	1.0	1.0	1.0	1.0	0.0102
12012	0	49	31	nan	0.96	0.9714	0.9657	0.1385	1.0	1.0	1.0	1.0	1.0	1.0	0.0409
19169	0	21	23	nan	1.0	0.92	0.96	0.1766	0.9815	0.975	1.0	1.0	0.9815	0.975	0.1937
19487	0	24	26	nan	0.96	0.96	0.96	0.194	0.9705	0.96	1.0	1.0	0.9705	0.96	0.2321
18513	0	41	22	nan	0.95	0.96	0.955	0.1314	0.9908	0.9875	1.0	1.0	0.9908	0.9875	0.0523
18514	0	47	22	nan	0.9578	0.95	0.9539	0.1508	0.9779	0.97	1.0	1.0	0.9779	0.97	0.1588
19253	0	22	33	nan	1.0	0.9048	0.9524	0.197	0.9815	0.975	1.0	1.0	0.9815	0.975	0.0979
18433	0	98	26	nan	0.9695	0.9333	0.9514	0.1157	1.0	1.0	1.0	1.0	1.0	1.0	0.0418
18455	0	66	33	nan	0.9692	0.9333	0.9513	0.1655	1.0	1.0	1.0	1.0	1.0	1.0	0.0588
6563	0	23	107	nan	0.91	0.9909	0.9505	0.0501	1.0	1.0	1.0	1.0	1.0	1.0	0.0608
19449	0	38	36	nan	0.925	0.9714	0.9482	0.0975	1.0	1.0	1.0	1.0	1.0	1.0	0.0254
2959	0	121	26	nan	0.967	0.92	0.9435	0.1756	0.9535	0.9371	1.0	1.0	0.9535	0.9371	0.3159
20675	0	24	41	nan	0.88	1.0	0.94	0.2125	0.9772	0.97	1.0	1.0	0.9772	0.97	0.232
20390	0	170	46	nan	0.8706	1.0	0.9353	0.2689	0.9978	0.9971	0.9895	0.9863	0.9894	0.9861	0.1633
18127	0	29	24	nan	1.0	0.87	0.935	0.1076	1.0	1.0	1.0	1.0	1.0	1.0	0.1041
18039	0	34	57	nan	0.9381	0.9273	0.9327	0.2168	1.0	1.0	1.0	1.0	1.0	1.0	0.0721
16328	0	22	24	nan	0.9	0.96	0.93	0.088	1.0	1.0	1.0	1.0	1.0	1.0	0.0223
17882	0	20	22	nan	0.95	0.91	0.93	0.2249	0.9815	0.975	0.9815	0.975	0.975	0.9667	0.3776
19412	0	23	24	nan	0.86	1.0	0.93	0.2778	0.9852	0.98	1.0	1.0	0.9852	0.98	0.2325
17597	0	28	26	nan	0.9267	0.9267	0.9267	0.2435	1.0	1.0	0.9852	0.98	0.9852	0.98	0.122
20259	0	22	41	nan	0.95	0.9028	0.9264	0.2534	0.8671	0.82	1.0	1.0	0.8671	0.82	0.616