

# Search demo for numericsearch.com

The screen shots below show examples. Initially the table with Domain Spaces (DSs) is shown

**NumericSearch** \* i4 \* iu search kw0 login reg own us

\* i7=1000, | 2015-07-23 space-of-spaces || v358132

Select i7 (index of Domain Space)

< << < > >> >| 1000..1024,.4011

i7	s	r
1000	91	68 space-of-spaces    v358132
1001	30	9 ride
1002	28	3 my-location
1003	28	1 real-estate
1004	7	0 car
1005	518	10001 test-space    try search 0..10: subv1, subv2 filled with pseudo random numbers 0..10
1006	47	23 Cupboard   Schrank
1007	108	11 Diode    (for rectification)
1008	171	1500001 260dim-demo    try search 0..10: subv1, subv2 filled with pseudo random numbers 0..10
1009	202	57 text-as-dimension-example    dimensions (not used for similarity comparison) can also repr
1011	3	1 cardiovascular-disease
1012	20	2 Tamflu-Test    Is Tamflu indicated? For answer of this question we could fill this space with
1013	40	85 NOx-Pollution-in-1000tons    exemplary data from Australia, Austria, Belgium, Germany
1014	2	8 Screw   Schraube
1015	135	24 datacube-example-as-TS    data like "The RDF Data Cube vocabulary" example chapter 3
1016	0	0 opinion-about-xxx
1017	0	0 climate-fluctuations
1018	4	0 Meeting   Treffen
1019	44	11 Kugellager-Edelstahl
1020	0	0 Help    Search help (kind of help, time, location, duration etc.)
1021	0	0 SleepDay    Documentation of one day sleep with result, result optionally after daycount da
1022	0	0 MRT-usage-year    yearly usage data about one magnetic resonance tomograph
1023	423	100001 test-150dim    try search 0..10 in subv1(Euclidean metric) and subv2(Manhattan metric): si
1024	8	1 traffic-accident    DVs can become increasingly part of legislative vocabulary, existing judge

Motivation: For description of reality usually words of language are used, but they categorize the original quantitative features of reality. Depending on the domain of interest, specific features can be selected and represented more precisely by vectors ("Domain Vectors" = DVs) in "Domain Spaces" (DSs). DSs represent domain specific metric spaces. Every DS is unambiguously identified by a URI which is called "Domain Space Identifier" (DSI) and which can be the URL of the DS definition in a web standard. The DVs of a DS are accessible to similarity search with optional range restriction.

NumericSearch consists of 2 steps:

1. Selection of the DS directly or by text search of its DSI (first keyword kw0)
2. Similarity and/or regional search of DVs within this DS.

Click on the index i7 (e.g. 1005 for "test-space") to open the search window for this DS; Search of 4 on dim0 and 5 on dim1 of subvector 1 is shown in the following screen shot:

i4 iu kw0 login reg own home

i7=1005, o | 13-03-15' test-space || try search 0..10: subv1, subv2 filled w

**DV search in DS 1005 (test-space)** search-stat

< << < > >> >| 0..2..2

	sim	min	max	g
0				subv0
0				<input type="checkbox"/> dim0
1				<input type="checkbox"/> dim1
1				subv1
0	4			<input checked="" type="checkbox"/> dim0
1	5			<input checked="" type="checkbox"/> dim1
2				<input type="checkbox"/> dim2
3				<input type="checkbox"/> dim3
2				subv2
0				<input type="checkbox"/> dim0
1				<input type="checkbox"/> dim1
2				<input type="checkbox"/> dim2
3				<input type="checkbox"/> dim3

Click on the search button to activate similarity search. In the search result the nearest 1000 DVs are shown;

search result

new search

repeat

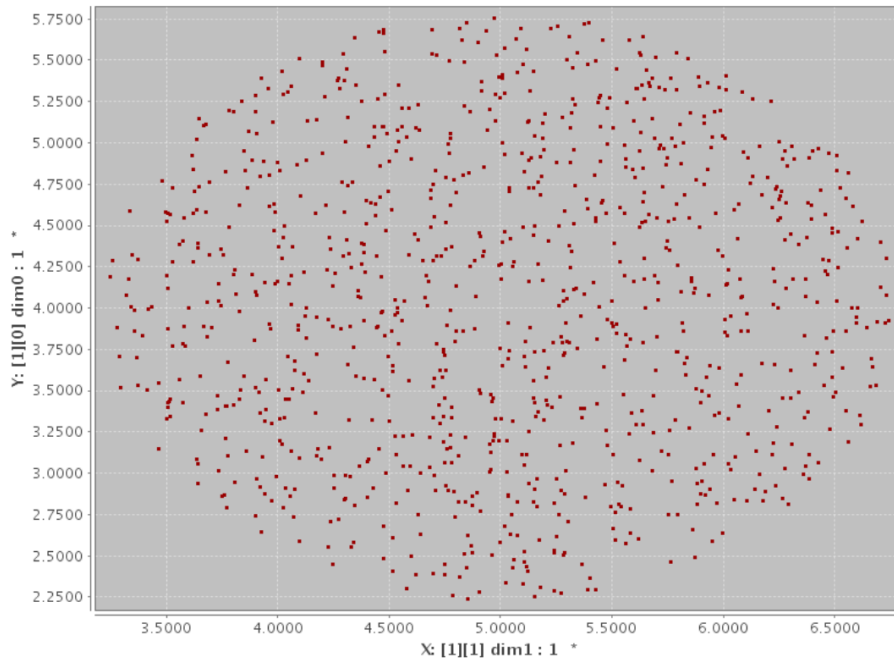
par

csv-download

search-stat

DS-stat

1000 of DS 1005 (test-space)



X: av= 5.023418 sd= 0.864487 min= 3.250428 max= 6.742207  
 Y: av= 4.032707 sd= 0.880358 min= 2.237352 max= 5.753851

< << < > >> > page 1

i4	d	a
7063	0.0981	2 o sr7063   7063, 70630, 3.908132833, 5.034538, 7.147611, 7.46827, 1.704745, 2.894721,
649	0.1329	1 o sr649   649, 6490, 4.070861859, 4.887596, 2.576471, 4.929704, 8.732638, 7.257069, 1.
5111	0.1717	1 o sr5111   5111, 51110, 3.872798143, 4.884745, 4.474978, 5.275793, 6.588654, 8.322626
6934	0.1728	0 o sr6934   6934, 69340, 4.172787102, 5.001417, 3.445889, 0.808994, 2.812254, 3.44751-
2750	0.174	0 o sr2750   2750, 27500, 3.884695863, 5.13028, 4.109866, 4.131625, 8.039367, 4.701057,
8323	0.2073	0 o sr8323   8323, 83230, 4.16463307, 5.125988, 9.867605, 6.472966, 3.729451, 6.551642,
5289	0.2153	0 o sr5289   5289, 52890, 3.863723514, 4.833327, 6.919869, 6.616594, 3.222485, 4.96139-
8807	0.2228	0 o sr8807   8807, 88070, 3.984839645, 4.777747, 9.355307, 3.711151, 3.631522, 4.271977,
3963	0.2319	0 o sr3963   3963, 39630, 3.798017402, 5.113934, 7.17967, 0.439668, 8.541842, 9.503309,
7618	0.2383	0 o sr7618   7618, 76180, 4.134416878, 4.803261, 9.912351, 4.335135, 8.361697, 0.61382!
8747	0.2413	0 o sr8747   8747, 87470, 3.86175477, 4.802244, 9.11172, 0.959159, 6.462922, 4.994271, ^
8094	0.2426	0 o sr8094   8094, 80940, 3.757477831, 4.99601, 0.686027, 0.330775, 3.587284, 7.596117,
7877	0.2539	0 o sr7877   7877, 78770, 4.169564272, 5.188969, 9.457632, 7.951833, 8.583165, 6.76111!
2226	0.2594	0 o sr2226   2226, 22260, 4.259336229, 4.992609, 3.41702, 0.306351, 9.496402, 1.23771, !
2952	0.26	0 o sr2952   2952, 29520, 4.253591155, 5.05726, 8.49911, 0.961599, 2.416654, 4.647838, !
5470	0.264	0 o sr5470   5470, 54700, 4.015045871, 5.263554, 9.777864, 4.518257, 1.171337, 9.17638!
9528	0.264	0 o sr9528   9528, 95280, 3.893096565, 4.758609, 1.747771, 7.611812, 7.382523, 3.82975!
1576	0.2646	0 o sr1576   1576, 15760, 3.738282628, 5.038867, 7.786899, 4.336552, 5.098724, 9.83851:
756	0.2671	0 o sr756   756, 7560, 4.267106494, 5.001222, 8.983115, 0.834437, 8.960626, 7.634141, 8
9196	0.2842	0 o sr9196   9196, 91960, 3.801053423, 4.797067, 9.917184, 0.3151, 6.144257, 0.380419, ^
5079	0.285	0 o sr5079   5079, 50790, 4.044300303, 5.281513, 2.736529, 4.657159, 4.619477, 4.59174!
9060	0.2881	0 o sr9060   9060, 90600, 4.254133091, 4.86422, 8.662401, 4.849798, 8.653592, 1.367096,
5107	0.2898	0 o sr5107   5107, 51070, 4.2834449, 5.060374, 1.906339, 7.464272, 7.893641, 1.961405, ^
2844	0.2999	0 o sr2844   2844, 28440, 4.102658149, 5.281824, 9.370033, 0.401731, 6.475414, 8.56754-
2486	0.3035	0 o sr2486   2486, 24860, 4.05927995, 5.297657, 6.465063, 4.440068, 6.459564, 9.345731,
5179	0.3044	0 o sr5179   5179, 51790, 3.909220495, 5.290577, 0.21403, 7.445727, 1.732181, 8.636606,
6151	0.3048	0 o sr6151   6151, 61510, 3.73565338, 5.151774, 0.300121, 9.958151, 2.845777, 7.21255, !
8424	0.3096	0 o sr8424   8424, 84240, 3.69250655, 5.03612, 5.831018, 5.968336, 4.594454, 4.676307, .
1932	0.3102	0 o sr1932   1932, 19320, 4.288140424, 4.885048, 6.414118, 9.665047, 5.354763, 0.75573:
4345	0.3147	0 o sr4345   4345, 43450, 3.704845874, 5.109127, 0.957351, 5.964186, 0.083307, 9.25936:
4310	0.3154	0 o sr4310   4310, 43100, 4.266593116, 5.168455, 2.636044, 5.173328, 2.425382, 1.88604!

343 th search in DS 1005 (test-space) , 10001 (100%) within 10001 found, 1000 listed

new search

The nearest 1000 DVs around the searched point are shown. The spherical distribution of the graph of the search result (via checkboxes selected axes of the

graph are dim0 and dim1, in this example the same as those for similarity search) is a consequence of the euclidean metric of subvector 1;

Search of 6 on dim100 and 3 on dim101 of subvector 2 is shown in the following screen shot:

[i4](#) [iu](#) [kw0](#) [login](#) [reg](#) [own](#) [home](#)

i7=1005, o | 13-03-15' test-space || try search 0..10: subv1, s

## DV search in DS 1005 (test-space)

|< << < > >> >| 2..2

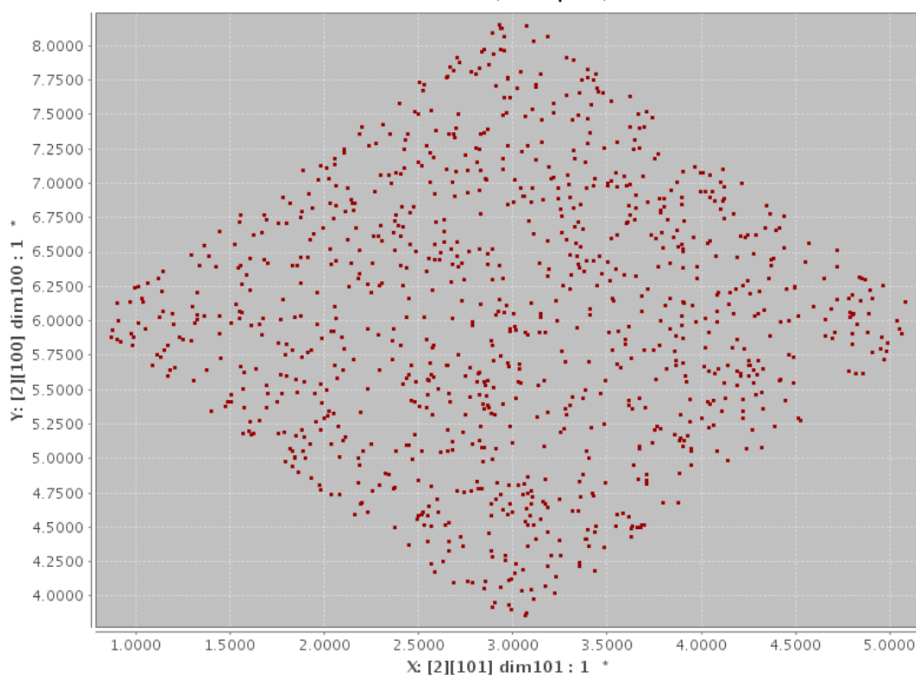
	sim	min	max	g
2				subv2
93				<input type="checkbox"/> dim93
94				<input type="checkbox"/> dim94
95				<input type="checkbox"/> dim95
96				<input type="checkbox"/> dim96
97				<input type="checkbox"/> dim97
98				<input type="checkbox"/> dim98
99				<input type="checkbox"/> dim99
100	6			<input checked="" type="checkbox"/> dim100
101	3			<input checked="" type="checkbox"/> dim101

Click on the search button to activate similarity search.

**search result**

[new search](#) [repeat](#) [par](#) [csv-download](#) [search-stat](#) [DS-stat](#)

1000 of DS 1005 (test-space)



X: av= 2.996282 sd= 0.924117 min= 0.872104 max= 5.082777  
 Y: av= 6.001482 sd= 0.943491 min= 3.857126 max= 8.150704

< << < > >> >| page 1

i4	d	a
1739	0.0535	o sr1739   1739, 17390, 6.195098539, 2.389023, 4.017403, 9.771225, 1.174572, 7.913621
7410	0.054	o sr7410   7410, 74100, 1.365725516, 2.779944, 4.375879, 9.573409, 1.190312, 1.01163
2371	0.0673	o sr2371   2371, 23710, 1.519376218, 8.116297, 7.335234, 2.461083, 9.527403, 4.75855
1131	0.0848	o sr1131   1131, 11310, 7.063318305, 3.239314, 4.185781, 8.01757, 3.978458, 9.847661,
5197	0.092	o sr5197   5197, 51970, 2.321271707, 9.901515, 2.348217, 0.244805, 5.115325, 2.75422
9409	0.1051	o sr9409   9409, 94090, 9.106726407, 8.848572, 5.943569, 1.784816, 3.91986, 0.608172,
896	0.1327	o sr896   896, 8960, 2.33925223, 9.514341, 7.02878, 0.249577, 5.533494, 5.172647, 9.7
1146	0.1437	o sr1146   1146, 11460, 8.915135524, 0.140988, 5.117604, 6.961664, 3.114697, 0.29983,
4800	0.1496	o sr4800   4800, 48000, 8.859930913, 5.048549, 7.077379, 6.983994, 9.737872, 8.55488!
1108	0.1543	o sr1108   1108, 11080, 4.514582599, 2.959683, 6.620089, 4.911879, 1.788924, 2.95067!
6115	0.1709	o sr6115   6115, 61150, 0.746018835, 7.033046, 2.624209, 9.340752, 9.266899, 2.00397!
55	0.1774	o sr55   55, 550, 6.654175254, 7.297583, 8.49902, 3.673403, 1.350556, 2.236699, 6.0344
6796	0.2046	o sr6796   6796, 67960, 3.241531547, 4.974589, 6.867757, 9.630783, 6.577407, 0.21383:
368	0.2174	o sr368   368, 3680, 9.236071549, 5.176083, 1.181265, 5.475582, 0.762208, 1.65276, 0.4
1113	0.2225	o sr1113   1113, 11130, 6.856462419, 4.899336, 2.678397, 5.022691, 6.363746, 2.21827:
5459	0.2247	o sr5459   5459, 54590, 1.044489565, 9.512492, 1.974996, 0.96808, 9.338715, 2.819463,
5261	0.2313	o sr5261   5261, 52610, 0.941462332, 7.353208, 6.94601, 5.516427, 2.53552, 7.466017, '
693	0.235	o sr693   693, 6930, 9.199385511, 1.317772, 3.017132, 2.989018, 2.7092, 4.735088, 0.11
4795	0.2479	o sr4795   4795, 47950, 5.039006057, 2.130654, 6.197245, 5.745942, 6.247485, 9.71187,
7049	0.2575	o sr7049   7049, 70490, 3.619397684, 5.694758, 5.129086, 4.506231, 7.932018, 7.56032:
8182	0.2644	o sr8182   8182, 81820, 8.414776266, 1.475567, 9.403994, 1.541743, 1.706018, 7.41582:
3528	0.2875	o sr3528   3528, 35280, 1.307793022, 7.167736, 9.257958, 2.664894, 3.174843, 3.13773:
6404	0.2932	o sr6404   6404, 64040, 2.236982434, 3.042673, 8.761163, 8.900374, 5.282674, 5.72993!
5343	0.3168	o sr5343   5343, 53430, 6.789422918, 2.917401, 8.748277, 4.648841, 5.646448, 4.47978,
6233	0.3287	o sr6233   6233, 62330, 2.842154343, 2.357098, 3.083575, 1.480435, 1.501013, 4.12357,
6293	0.3359	o sr6293   6293, 62930, 1.820232656, 5.100469, 9.790028, 0.605057, 9.659593, 8.76621:
8659	0.3495	o sr8659   8659, 86590, 4.742066121, 0.918493, 4.45133, 1.928547, 2.668577, 8.130827,
4612	0.3555	o sr4612   4612, 46120, 3.314298941, 9.201885, 2.271136, 4.719568, 0.632261, 9.63505:
9056	0.3584	o sr9056   9056, 90560, 2.822171962, 8.373503, 0.916683, 7.96198, 0.103412, 1.281412,
3998	0.3756	o sr3998   3998, 39980, 0.054084982, 2.330585, 2.456137, 4.256623, 0.338559, 6.34631-
7785	0.3827	o sr7785   7785, 77850, 5.43969239, 2.52998, 4.078987, 5.161249, 9.184545, 1.239691, !

344 th search in DS 1005 (test-space) , 10001 (100%) within 10001 found, 1000 listed

[new search](#)

The nearest 1000 DVs around the searched point are shown. The rhombic shape of the resulting distribution is consequence of the manhattan metric in subvector 2. Via checkboxes selected axes of the graph are dim100 and dim101, in this example the same as those for similarity search.