LU11.A02 pgvector direkt testen (optional)

Wie es der Zufall so will, gibt es eine Erweiterung für PostgreSQL names `pgvector`, die eine Vektordatenbank ermöglicht.

Erstellen Sie die Tabelle `documents`

```
CREATE TABLE documents (
    id SERIAL PRIMARY KEY,
    content TEXT,
    embedding vector(384) -- number of dimensions
);
```

- Überprüfen Sie, ob die Tabelle `documents` existiert.

```
INSERT INTO documents (content) VALUES ('Dies ist ein Test.);'
```

- Sie können Überprüfen, ob INSERT-Statements funktionieren.

```
INSERT INTO documents (content) VALUES ('Dies ist ein Test.);'
```

- In diesem Fall haben Sie einen Eintrag in der Tabelle

```
Select count(*) from documents;
```

- Leeren Sie die Tabelle für die richtigen Einträge

```
Delete from documents;
```

- INSERT INTO documents (content, embedding) VALUES ('Der Hund läuft durch den Park.', '[-0.01590, 0.05760, 0.10708, -0.05196, 0.04090, 0.06346, 0.06919, 0.05104, 0.00674, -0.01215, -0.01354, -0.01906, -0.03205, -0.13006, 0.01676, -0.00448, -0.09528, 0.10145, 0.09780, 0.01471, 0.01939, -0.05531, -0.02355, -0.01994, -0.05773, 0.04211, -0.06326, 0.01863, 0.00957, -0.03043, 0.05415, -0.03349, -0.03279, -0.02367, -0.01436, 0.03216, 0.00893, -0.10308, -0.01476, 0.09056, -0.12382, 0.02256, -0.00536, -0.03052, 0.01583, 0.00256, -0.02910, 0.06695, -0.03502, -0.04742, 0.07972, -0.02335, 0.14206, -0.02069, 0.02336, 0.00635, -0.06238, -0.03436, 0.03464, -0.03658, -0.00347, -0.03864, -0.06842, -0.02570, -0.02699, -0.10568, 0.04725, -0.02066, 0.00937, 0.05374, 0.03057, -0.02713, -0.04893, -0.02493, 0.03692, -0.01410, -0.04194, 0.00608, -0.03253, -0.14563, 0.02550, 0.00821, 0.00269, 0.02471, 0.08793, -0.04526, 0.01918, -0.00521, 0.01333, -0.02217, -0.04947, -0.02222, -0.11442, 0.02217, -0.01661, -0.00060, -0.00397, 0.04337, -0.00786, 0.04761, 0.01751, 0.08043, -0.03962, 0.03854, -0.03158, -0.08369, -0.02696, 0.00953, 0.01246, 0.01385, -0.00471, -0.02527, 0.03858, 0.03237, 0.00159, -0.02689, -0.02381, -0.15586, -0.04327, -0.02903, 0.03445, 0.02641, -0.05279, 0.05372, -0.01321, -0.02901, 0.04918, -0.00000, -0.07203, -0.07302, -0.01219, -0.00125, 0.03268, -0.00102, -0.07588, 0.01222, -0.02654, 0.08624,

```
0.02907, -0.00238, -0.05196, -0.10719, -0.01028, -0.01095, 0.05186,
0.02246, 0.05778, 0.00433, -0.06304, 0.09878, -0.00926, 0.05241,
0.06771, -0.10728, 0.02559, 0.02227, 0.00776, 0.03988, 0.00839,
-0.04617, 0.01720, -0.02429, -0.00953, -0.05472, 0.01001, 0.07832,
0.01126, -0.03362, 0.05528, -0.05969, -0.02338, -0.06053, -0.00545,
0.08938, 0.09355, -0.00068, -0.01336, 0.00555, -0.03235, 0.02389,
-0.15267, 0.00174, -0.04071, 0.01486, -0.05847, -0.02776, -0.01536,
0.07795, 0.00223, 0.10342, -0.01869, 0.00823, -0.00532, -0.07391,
0.10231, -0.00424, 0.02963, 0.08466, -0.04365, 0.00264, -0.00886,
0.04803, -0.01138, -0.00050, -0.06622, 0.12869, -0.06032, 0.03138,
-0.09917, -0.05930, -0.02692, 0.02115, 0.01557, -0.01919, -0.01894,
-0.01780, -0.02566, 0.03801, -0.04992, -0.02465, 0.02631, -0.05321,
-0.04511, -0.00000, 0.05333, -0.03966, -0.00714, -0.02383, -0.06375,
0.20953, -0.05797, 0.04712, -0.12515, -0.00665, -0.04260, 0.02494,
0.07486, -0.01544, -0.02905, 0.02455, 0.05139, -0.00764, -0.09002,
0.05430, 0.00360, -0.00686, -0.00156, 0.07753, -0.04145, 0.02774,
0.08736, 0.03777, -0.06327, -0.02480, -0.02065, -0.03038, -0.00086,
0.03277, -0.00710, 0.01405, 0.07218, 0.03127, -0.04679, 0.05584,
-0.02476, 0.00310, -0.02074, 0.01972, 0.07229, -0.01142, -0.10555,
0.02156, -0.08322, -0.00100, 0.06746, 0.00573, 0.02355, -0.08255,
0.07384, 0.01578, -0.07407, -0.02456, -0.06829, 0.02988, 0.09082,
0.08585, -0.07299, 0.02452, 0.02152, -0.08003, -0.10722, -0.02981,
0.06592, -0.01835, -0.00571, 0.06331, 0.05723, 0.01513, -0.06582,
0.03041, 0.08508, 0.02036, 0.00920, -0.00179, -0.03281, 0.00088,
0.07919, 0.01332, -0.05353, 0.01477, -0.00852, -0.04808, 0.01272,
0.01205, 0.03206, 0.01440, -0.04214, 0.03412, -0.03875, -0.00000,
0.03829, -0.00449, 0.00374, -0.00946, 0.01690, -0.11200, 0.01257,
0.00165, -0.09551, 0.04445, -0.03091, 0.07380, -0.04560, 0.05470,
0.01869, 0.02848, -0.00027, 0.02792, -0.02747, -0.00094, 0.02597,
-0.05226, -0.01447, 0.03359, 0.01793, -0.03485, 0.03273, -0.10018,
0.04703, -0.06515, 0.06083, 0.09394, -0.05146, 0.01588, 0.03086,
-0.03902, -0.01637, -0.00140, -0.01574, 0.09720, 0.00387, 0.10042,
0.07453, -0.02445, -0.01154, -0.01369, 0.00689, 0.04894, 0.04651,
0.00300, -0.05208, -0.01367, 0.03340, 0.06036, 0.01158, 0.03343,
-0.01005, -0.06027, -0.05874, -0.03169, 0.04574, 0.02431, 0.07514,
0.06036]');
```

- INSERT INTO documents (content, embedding) VALUES ('Eine Katze schläft auf dem warmen Sofa.', '[-0.00711, -0.00126, 0.02677, 0.01282, 0.04307, 0.07922, 0.01864, -0.00389, 0.02205, 0.01343, -0.05660, -0.04328, 0.03836, -0.06556, -0.00852, -0.12838, -0.05110, -0.00628, 0.05067, 0.01989, -0.04880, 0.00524, -0.00023, 0.01179, 0.01032, -0.06434, -0.00937, -0.01534, -0.02890, 0.00996, 0.08728, -0.00570, -0.04132, 0.00085, 0.02651, -0.01292, -0.03437, -0.10519, -0.10064, 0.04373, -0.07573, -0.05152, -0.08331, -0.09508, 0.00862, 0.06358, -0.05573, 0.00398, -0.03595, 0.01107, -0.01814, -0.05499, 0.06934, 0.02145, 0.06002, -0.00958, 0.03415, 0.05556, 0.02662, 0.00761, 0.00619, -0.00766, -0.07285, 0.00341, -0.04906, -0.02628, -0.00198, -0.04506, -0.04896, 0.03340, 0.02619, -0.06032, 0.03032, -0.02236, 0.01074,

```
    -0.07417, -0.01976, -0.03220, -0.04477, -0.07230, -0.00271, -0.00219,
    0.00727, 0.01074, -0.05480, 0.03234, 0.06381, -0.02367, 0.01141,
    -0.01706, -0.00410, -0.02886, -0.06579, 0.00722, 0.01307, -0.01849,
    0.04327, 0.04853, 0.00966, 0.07214, -0.01899, -0.00071, 0.05235,
    0.06729, -0.07341, -0.06767, 0.02899, -0.04362, -0.03047, 0.01561,
    0.02647, -0.04262, 0.04433, -0.05078, 0.02164, -0.03115, 0.05717,
    -0.11359, 0.03102, -0.03417, 0.07878, 0.05079, 0.03762, 0.09780,
    -0.00043, -0.02602, 0.03036, -0.00000, -0.08481, -0.00123, -0.00666,
    0.01364, 0.04075, -0.03848, -0.08715, 0.06017, -0.00885, 0.05519,
    -0.01698, 0.05289, 0.00337, -0.04045, 0.02128, -0.03944, -0.02859,
    0.06049, 0.07145, -0.01022, -0.08586, -0.02074, 0.07784, 0.08921,
    -0.00391, -0.05362, 0.03018, -0.03118, -0.11000, 0.01393, -0.00366,
    0.00380, -0.02643, -0.01510, -0.08177, -0.01436, -0.00336, 0.08290,
    -0.02233, 0.03328, 0.07091, -0.01555, 0.03074, -0.02299, 0.02592,
    0.08531, 0.00492, 0.05743, -0.00626, -0.03371, -0.01262, 0.01683,
    -0.02495, 0.01228, -0.04498, 0.10605, -0.01457, -0.00479, 0.01628,
    -0.00633, 0.00408, -0.00137, -0.02580, -0.05769, -0.04357, -0.02071,
    0.01907, -0.03989, 0.03201, 0.02868, -0.08305, 0.06634, 0.15218,
    0.00473, -0.00384, 0.03599, -0.03307, 0.11406, 0.00092, -0.03822,
    -0.02103, -0.06143, 0.00915, -0.03508, 0.04229, -0.09558, -0.07878,
    0.03006, -0.08054, 0.03867, -0.02087, -0.09655, 0.00321, -0.03374,
    0.00364, -0.00000, 0.06857, -0.04805, -0.03993, 0.06912, 0.00464,
    0.10951, -0.06589, -0.00042, -0.09600, 0.02595, 0.03320, -0.06374,
    0.06742, -0.07901, 0.02549, 0.05758, -0.00041, -0.05264, -0.00314,
    0.01862, -0.02556, -0.06051, -0.02422, 0.06692, -0.03103, 0.02566,
    0.04554, 0.09589, -0.07605, 0.01280, -0.02927, -0.06818, -0.01480,
    0.03224, 0.02526, 0.08400, 0.02566, 0.05990, -0.00195, 0.03866,
    0.02495, 0.04093, -0.01064, 0.03440, 0.11336, -0.01212, -0.16080,
    -0.03877, 0.00642, -0.03145, 0.02972, -0.01972, 0.01847, -0.06019,
    -0.01910, -0.00709, -0.04097, -0.01469, -0.04030, 0.06491, 0.08734,
    0.12555, 0.04837, 0.05323, 0.01500, -0.08827, -0.14485, -0.09304,
    0.07367, 0.03537, 0.06847, -0.00161, 0.00524, 0.04148, -0.09327,
    -0.02967, 0.11559, 0.06700, -0.02526, 0.08083, -0.02736, 0.03907,
    0.05650, 0.04225, 0.05409, -0.04426, 0.07632, -0.02369, -0.01143,
    -0.05722, -0.00048, 0.07795, 0.03283, -0.00211, 0.03929, -0.00000,
    -0.00948, -0.05327, -0.05527, 0.06362, 0.07910, -0.17217, -0.09031,
    -0.06706, -0.06044, -0.04123, -0.01378, 0.00965, -0.01131, 0.09929,
    0.04177, 0.09175, -0.08783, 0.03209, -0.01484, -0.04617, 0.03967,
    -0.04918, -0.00175, -0.06762, 0.02043, -0.03234, 0.00152, 0.01268,
    -0.01151, -0.02774, -0.08926, 0.04601, -0.07244, 0.01594, 0.04323,
    -0.02154, -0.02356, 0.00132, -0.02728, 0.02111, 0.02428, 0.04330,
    -0.00512, -0.12128, -0.00225, -0.03939, -0.00288, 0.03242, 0.07509,
    0.12356, 0.02272, 0.05251, 0.03601, 0.06739, -0.01518, 0.01071,
    -0.02104, -0.00591, 0.05052, -0.02393, 0.04712, 0.05661, 0.02156,
    0.03162]');
```

- INSERT INTO documents (content, embedding) VALUES ('Programmierung in Java macht Spaß.', '[-0.04320, 0.09149, -0.02907, -0.06482, -0.03118, 0.00736, 0.05101, 0.12620, -0.09678, -0.06097, -0.04286, -0.04671, 0.05544, -0.06011, -0.00836, -0.07430, -0.03463, 0.03645, 0.01377,

```
-0.06727, 0.01024, -0.06941, -0.02241, -0.03505, 0.00967, 0.06197,
0.03928, -0.01860, 0.00158, -0.00656, 0.01644, -0.01128, 0.06484,
0.04973, 0.01244, 0.06818, -0.03447, -0.02072, -0.02826, 0.03619,
-0.15857, 0.03426, -0.05092, -0.01910, 0.03031, -0.03754, -0.06047,
-0.01739, -0.03357, -0.01355, -0.12385, -0.07073, 0.01569, -0.10495,
0.01973, -0.02886, 0.08422, 0.05480, -0.03242, -0.06808, -0.00424,
-0.03106, -0.11074, 0.02438, 0.00117, -0.07912, 0.06757, 0.01374,
0.06102, -0.05175, -0.03620, -0.00726, -0.04161, 0.06855, -0.11766,
0.01132, -0.00229, 0.03213, 0.00072, -0.06043, 0.01863, 0.01394,
-0.05643, 0.05950, 0.00344, 0.03332, 0.00381, 0.00361, 0.10464,
0.10793, -0.00326, -0.03851, -0.05545, 0.02678, -0.07018, 0.02007,
0.01595, -0.00507, -0.00026, 0.07487, -0.02787, -0.01857, 0.08420,
0.00026, 0.01872, -0.06249, -0.00876, -0.01186, 0.06205, -0.05796,
-0.00380, -0.06276, -0.00360, -0.04937, 0.05332, 0.05278, 0.05638,
0.01297, -0.02681, 0.03694, 0.07506, 0.02586, 0.00068, 0.00916,
-0.02921, 0.01173, -0.02710, -0.00000, -0.01905, -0.15280, -0.01343,
0.04360, -0.05674, -0.03473, -0.00603, 0.07633, -0.01970, -0.03206,
0.02305, -0.02959, 0.01285, 0.03574, 0.09524, -0.08112, 0.02827,
0.01625, -0.07733, -0.06954, 0.05222, -0.01880, 0.01830, 0.02542,
0.03093, 0.00114, 0.07404, -0.03883, 0.02319, 0.05829, 0.03644,
-0.04899, -0.09560, 0.08661, 0.01613, -0.02322, 0.02432, 0.00894,
0.08997, -0.07360, -0.01976, -0.06197, 0.03914, -0.05359, 0.06345,
-0.01754, -0.03569, 0.04191, -0.01094, 0.03894, 0.01633, 0.04923,
0.06424, 0.03291, -0.01286, 0.04455, 0.00377, 0.01917, -0.03765,
0.05911, -0.05198, 0.05485, 0.01867, 0.01839, 0.00528, -0.03385,
-0.03193, -0.08873, 0.02162, 0.08852, -0.06307, -0.02544, 0.02540,
0.05153, -0.04176, -0.03080, 0.03567, 0.05313, -0.12846, -0.07282,
-0.07656, -0.05561, 0.02358, -0.08034, 0.02759, 0.03784, 0.02449,
0.02280, 0.04366, -0.01139, -0.00515, 0.04745, -0.06891, 0.07130,
0.01153, -0.00000, -0.02809, 0.01526, -0.09744, 0.01194, -0.03335,
0.06410, -0.04081, -0.00176, -0.08925, 0.04565, -0.09040, -0.01432,
0.00569, 0.04352, 0.00653, -0.01222, 0.04815, 0.02110, -0.06231,
0.02995, -0.01641, 0.03673, -0.04684, -0.02291, 0.03839, -0.06342,
0.00024, 0.06209, -0.03315, 0.05295, 0.06160, 0.03103, -0.08760,
-0.02895, -0.01942, -0.05829, 0.10143, 0.08240, -0.00793, 0.07945,
0.05254, -0.04358, 0.00198, 0.11115, 0.03686, 0.03465, -0.08480,
-0.02993, -0.04024, -0.04686, -0.01105, -0.04979, 0.11264, -0.04663,
0.00868, -0.02092, 0.00320, -0.01532, -0.03905, 0.04414, 0.00950,
-0.04743, 0.08942, -0.04367, 0.04120, -0.00002, -0.06431, 0.02833,
-0.03661, -0.02736, 0.05611, 0.05928, -0.03023, 0.05963, -0.06698,
0.01500, -0.00067, 0.02453, -0.06616, 0.00900, 0.08950, 0.05985,
0.04294, -0.04921, -0.03327, -0.04504, 0.04264, 0.04440, -0.08336,
-0.03506, -0.01714, 0.13089, 0.08293, 0.03917, -0.01050, -0.00000,
0.02217, -0.06189, 0.02975, 0.04239, 0.09772, 0.02725, -0.08559,
-0.00195, 0.00060, -0.01088, 0.00527, 0.05015, -0.03729, 0.10542,
0.05408, -0.03110, 0.02760, 0.00335, -0.04189, 0.06488, 0.08679,
-0.03124, -0.05536, 0.09805, -0.00138, -0.03899, 0.05762, 0.04123,
0.04786, -0.00399, -0.01272, 0.09749, 0.04348, -0.01376, -0.07119,
0.09796, 0.00677, 0.02649, -0.00979, -0.01368, -0.01728, 0.01866,
0.00032, -0.04019, 0.00662, -0.05815, -0.04381, -0.05185, 0.01390,
```

```
-0.01041, -0.09169, 0.06701, -0.01003, -0.04172, 0.02309, 0.06324,
-0.01555, -0.09723, -0.03298, 0.07984, -0.06707, 0.02211, 0.03867,
0.01291]');
```

- INSERT INTO documents (content, embedding) VALUES ('PostgreSQL ist eine leistungsfähige Datenbank.', '[-0.03429, 0.06173, -0.03975, 0.04145, -0.13126, 0.08621, 0.00319, 0.03005, 0.02991, -0.05117, -0.04699, 0.04494, -0.06536, -0.11712, -0.05831, -0.03202, -0.03093, 0.04725, 0.07477, -0.04728, -0.08303, -0.09535, -0.07372, 0.06229, -0.01554, -0.03045, 0.03512, -0.03472, -0.00566, -0.05086, -0.03260, 0.02053, 0.00268, 0.00175, 0.01844, 0.04087, 0.07505, -0.06817, -0.00669, -0.04954, -0.06285, -0.02958, -0.03496, 0.00985, 0.00384, -0.00861, 0.01516, 0.05489, -0.10802, 0.05866, -0.04387, 0.01079, 0.04925, -0.04233, 0.06288, -0.00771, -0.05741, -0.00522, 0.02249, 0.02093, 0.01000, 0.02915, -0.07094, 0.00470, -0.04696, -0.05301, 0.08767, -0.00060, 0.05788, -0.03261, 0.00762, 0.01103, -0.05033, 0.00664, -0.12247, 0.07863, -0.01307, -0.00867, 0.00905, -0.07175, 0.01002, 0.00153, -0.05467, 0.03779, -0.04065, -0.06465, -0.00931, 0.06274, -0.01006, -0.03775, 0.00558, 0.07641, -0.01715, 0.01494, -0.02367, -0.08040, 0.01042, 0.02684, 0.09627, 0.07352, 0.02585, 0.11794, -0.01239, 0.08656, -0.09040, -0.05076, -0.04871, -0.10463, 0.00778, 0.01017, -0.00876, -0.00884, -0.01377, -0.09049, 0.05491, 0.02176, -0.01173, -0.05618, 0.06138, -0.06323, 0.05558, 0.01370, 0.00106, -0.03077, -0.01695, 0.00426, 0.11145, 0.00000, -0.01202, -0.04827, 0.13671, -0.06535, -0.01604, -0.06013, 0.00468, -0.00589, 0.01689, 0.07291, -0.03153, -0.03819, -0.02570, -0.11258, 0.05101, 0.06928, -0.01854, 0.03407, 0.10890, 0.00512, 0.03370, -0.05489, -0.00358, 0.10547, 0.07028, -0.03498, 0.01182, 0.00162, 0.01408, 0.02239, 0.05972, -0.03349, -0.06217, 0.03234, 0.06371, -0.00949, -0.04787, 0.04037, 0.02349, 0.02598, 0.05811, -0.04757, -0.02338, -0.07412, 0.05797, 0.06830, 0.01898, -0.00709, 0.08436, -0.01178, -0.08683, -0.01899, -0.05214, 0.02430, 0.02977, 0.03940, -0.02171, -0.03022, 0.03671, 0.04785, 0.01935, -0.04217, -0.05305, -0.02807, -0.04319, -0.00436, -0.00642, 0.02296, 0.03615, 0.05378, -0.03141, 0.01154, 0.05067, 0.03298, -0.01094, 0.00116, -0.02965, 0.08282, -0.01046, 0.03991, -0.03255, -0.02745, -0.00858, -0.01008, -0.02097, 0.06187, 0.02063, 0.06393, -0.01959, 0.01639, -0.06338, 0.06820, 0.04937, 0.05954, 0.05427, -0.00000, -0.03163, -0.03699, -0.06069, 0.06353, 0.00068, 0.00493, -0.02719, 0.08729, -0.00329, 0.05034, -0.02068, -0.01700, 0.07002, 0.00851, -0.00563, 0.07312, -0.00705, -0.02048, -0.12685, 0.04062, -0.05809, 0.05376, -0.06523, -0.00163, 0.11719, -0.02240, 0.04088, 0.03741, -0.05736, 0.05935, 0.03757, -0.07742, 0.03090, 0.03066, -0.06035, -0.05338, 0.07963, -0.04046, 0.05022, 0.08698, -0.09134, 0.07421, -0.02496, -0.02369, 0.06774, 0.09304, -0.06478, -0.02399, -0.01144, -0.05802, -0.03668, 0.00622, -0.03913, -0.05955, 0.08552, 0.00956, -0.04334, 0.05085, 0.00232, -0.01426, -0.04774, 0.02829, 0.09394, -0.00823, 0.07830, -0.09227, 0.07673, -0.00887, 0.06290, -0.06586, 0.09524, 0.02547, 0.00277, 0.05460, -0.10717, 0.01665, -0.02714, 0.10181, -0.05907, -0.01473, -0.04846, 0.06107, 0.02659, 0.07890, -0.00959, -0.02693, 0.04252, -0.03587,

```
-0.06534, -0.05752, -0.02028, 0.01663, -0.11825, 0.04655, -0.01455,
-0.00000, -0.00500, -0.05158, -0.13957, 0.01721, 0.12876, -0.01686,
-0.00114, 0.05691, 0.00581, -0.01137, 0.04161, -0.01209, -0.03758,
0.01474, -0.03496, -0.02583, -0.04028, -0.02732, -0.01253, -0.07391,
0.03684, -0.02612, 0.00628, -0.09552, -0.04351, 0.00467, -0.02151,
0.05898, 0.06443, -0.01818, 0.00470, 0.01940, 0.02307, -0.08359,
0.02374, 0.00692, 0.02899, 0.04387, -0.07812, 0.02586, 0.05448,
0.02687, 0.01435, 0.00365, -0.05989, -0.07411, -0.02148, -0.01677,
-0.02766, 0.09163, -0.02525, 0.01594, 0.02753, 0.03219, 0.08931,
0.03065, -0.02586, -0.02974, -0.08107, -0.05400, -0.03935, -0.00705,
0.02187, 0.02754]');
```

- Nun sollten 4 Einträge vorhanden sein

```
Select count(*) from documents;
```

- Setzen Sie folgendes SELECT-Statement ab, um die 3 nächsten Einträge zu finden, der am nächsten zum Satz „Katzen sind meine Lieblingstiere" ist

```
SELECT id, content, embedding <=> '[-0.03493, 0.03568, 0.06867,
0.00082, -0.04072, 0.06786, 0.11940, -0.05452, 0.02797, -0.04935,
0.02574, 0.03369, -0.00755, -0.09016, -0.03898, -0.08418, -0.07572,
0.12806, -0.06438, -0.02141, 0.01308, -0.00135, 0.04206, -0.01135,
-0.03226, 0.00674, 0.03916, -0.02778, -0.02183, -0.06194, 0.11493,
0.00412, -0.04840, -0.03430, 0.05279, -0.04752, -0.00842, -0.05732,
-0.00380, 0.02335, -0.10179, -0.06320, -0.09921, -0.07888, -0.01643,
0.05722, -0.01505, 0.01265, -0.03972, -0.00492, -0.05816, -0.01095,
0.05496, -0.03182, 0.05747, -0.10006, -0.00392, 0.03742, 0.01361,
0.04257, 0.10364, -0.00892, -0.01067, -0.01833, 0.00142, -0.04466,
0.06020, -0.05770, -0.05920, 0.02491, 0.07516, -0.08650, -0.02995,
0.02948, -0.04823, -0.05966, -0.07892, -0.03719, -0.04004, -0.09690,
0.00099, -0.00529, 0.05824, 0.02274, -0.04542, -0.03596, 0.01114,
0.05981, 0.05816, 0.03222, -0.03906, -0.04377, -0.12412, 0.00144,
0.10311, -0.05397, 0.01379, -0.03965, -0.04770, 0.08296, -0.02025,
0.02099, 0.05772, 0.08974, -0.02686, -0.10557, 0.03211, -0.06085,
-0.01258, -0.01620, 0.03423, 0.01051, 0.07322, -0.10282, 0.07545,
0.00329, 0.07935, -0.03416, -0.00551, -0.00736, 0.06363, 0.03952,
0.06159, 0.11851, 0.02391, -0.04287, -0.03800, 0.00000, -0.03656,
-0.00219, -0.03037, -0.00321, 0.01003, -0.05004, -0.11151, 0.02934,
-0.05327, 0.03419, -0.02941, -0.03520, 0.00116, -0.03742, 0.00228,
0.02429, 0.00155, 0.05357, 0.05857, -0.06630, -0.01104, -0.01960,
0.09703, 0.06629, 0.00076, -0.04037, 0.05239, -0.01468, -0.05098,
0.00862, 0.08488, -0.04264, -0.01979, -0.05946, 0.00002, 0.03357,
-0.06341, 0.03716, -0.02466, 0.01536, 0.04432, -0.01202, -0.02409,
-0.06403, 0.02127, 0.08715, -0.00143, -0.00101, 0.04289, 0.00666,
-0.00493, 0.04477, -0.02715, 0.00680, -0.01724, 0.10950, -0.02329,
0.01558, -0.04293, -0.01325, 0.04967, -0.05981, -0.05935, -0.05094,
-0.02633, -0.00977, 0.01927, -0.02305, -0.00257, 0.07690, -0.11992,
-0.01335, 0.05334, 0.05576, 0.01851, 0.00626, -0.07686, 0.08395,
-0.01366, -0.03389, -0.05128, -0.05843, -0.00856, -0.05903, 0.02409,
```

```
0.01240, -0.06948, -0.03939, -0.02406, 0.09140, 0.00454, -0.03415,
0.01524, -0.03230, -0.02853, -0.00000, -0.03648, 0.02080, -0.05858,
0.06433, 0.02325, 0.06574, -0.05850, 0.06955, -0.06247, 0.02721,
0.00924, -0.07342, 0.01695, 0.03598, -0.02073, 0.05871, 0.04333,
-0.03323, 0.03020, 0.01873, -0.09406, 0.03331, -0.02906, -0.01306,
-0.08289, 0.02105, 0.03742, 0.05806, -0.02792, 0.02196, 0.04866,
-0.01016, -0.05985, -0.05076, 0.00396, 0.06116, 0.01258, 0.06670,
-0.01775, 0.06748, -0.06249, 0.06749, -0.00955, 0.02280, 0.06887,
-0.02375, -0.04198, -0.06005, -0.01574, -0.02914, -0.01564, 0.05372,
0.01805, -0.03720, 0.00938, -0.00115, -0.03708, -0.03602, -0.09096,
0.04249, 0.00143, 0.07988, 0.09154, 0.01241, 0.02756, -0.03852,
-0.09470, 0.00696, 0.11326, 0.04225, 0.00439, -0.05702, 0.01846,
-0.00595, -0.12662, 0.00903, 0.07057, 0.12596, -0.03087, 0.00775,
0.05668, 0.01745, -0.00602, 0.01471, 0.04832, -0.01996, 0.06925,
0.00526, -0.02115, -0.00283, 0.01880, 0.06725, 0.04957, -0.02828,
-0.01660, -0.00000, -0.00526, -0.08733, -0.09355, 0.00189, 0.09745,
-0.07254, -0.04005, 0.00660, -0.11776, -0.01369, -0.00677, 0.01250,
-0.04336, 0.05627, 0.04264, 0.03474, -0.09913, 0.06409, 0.01374,
0.00799, 0.09462, -0.01017, 0.00585, -0.04287, -0.04398, 0.05375,
0.02274, -0.07671, -0.01552, 0.02560, 0.02374, 0.12028, -0.04550,
-0.02612, -0.04541, -0.01518, -0.02856, 0.00332, -0.06168, 0.03811,
0.05920, 0.04857, 0.09972, -0.04516, -0.00653, -0.05994, -0.03416,
-0.03662, 0.09364, 0.07119, -0.01380, 0.05634, 0.03041, 0.09184,
0.03038, 0.05970, 0.00352, -0.00548, -0.06134, 0.02853, 0.01593,
0.08125, 0.04185, -0.04225]' AS distance FROM documents ORDER BY
distance ASC LIMIT 3;
```