



# Embedding Comparison Dashboard

Type in four equations (e.g., `love - hate , king - man + woman`), press **Tab** or **Return** to update, and compare them on shared charts.

Equation 1

love - hate

Equation 2

love / hate

Equation 3

hate / love

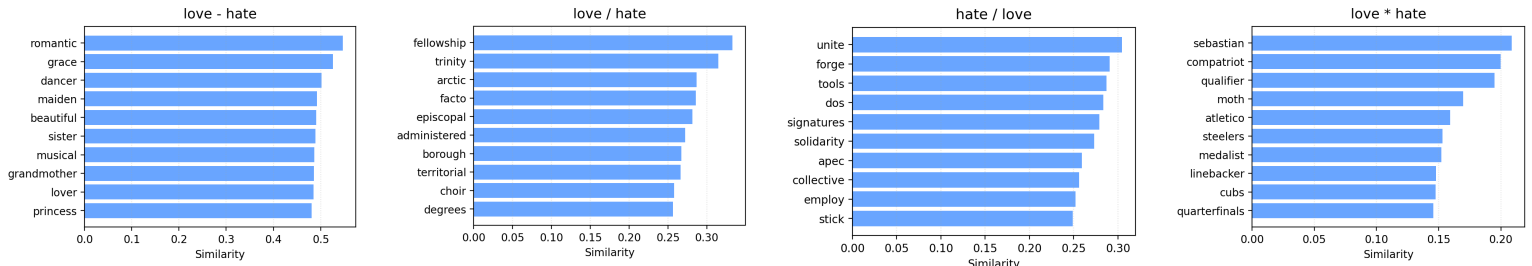
Equation 4

love \* hate

Select Top-K Similar Words

10

## Top-K Semantic Matches per Equation



## Detailed Tables (Vectors & Stats)

love - hate — Top-10 Word Vectors (100 dims)

love / hate — Top-10 Word Vectors (100 dims)

hate / love — Top-10 Word Vectors (100 dims)

love \* hate — Top-10 Word Vectors (100 dims)

|             | dim_1   | dim_2   | dim_3   |              | dim_1   | dim_2   | dim_3   |            | dim_1   | dim_2   | dim_3   |               | dim_1   | dim_2   | dim_3  |
|-------------|---------|---------|---------|--------------|---------|---------|---------|------------|---------|---------|---------|---------------|---------|---------|--------|
| romantic    | 0.0666  | 0.4144  | -0.1234 | fellowship   | 0.7444  | -0.2351 | 0.1234  | unite      | 0.4261  | 0.1217  | -0.2234 | sebastian     | -0.2173 | 0.4262  | 1.1234 |
| grace       | -0.1581 | 0.3223  | 0.2345  | trinity      | 0.4678  | -0.3385 | 0.0123  | forge      | 0.9463  | 0.1668  | -0.1234 | compatriot    | -0.3317 | -0.0918 | 0.0123 |
| dancer      | 0.0898  | -0.3574 | -0.0123 | arctic       | 0.6499  | -0.3297 | 0.1234  | tools      | 0.5446  | 0.933   | -0.5123 | qualifier     | -0.5405 | -0.1384 | 0.0123 |
| maiden      | 0.1843  | -0.1257 | 0.0123  | facto        | -1.0292 | -0.5201 | -0.0123 | dos        | -0.9326 | -0.1057 | -0.0812 | moth          | 0.3787  | -0.0256 | 0.0123 |
| beautiful   | 0.176   | 0.4698  | -0.0123 | episcopal    | -0.1593 | -0.9747 | 0.1234  | signatures | 0.0735  | 0.1731  | -1.0312 | atletico      | -1.1712 | 1.0625  | 1.1234 |
| sister      | 0.1087  | -0.2427 | 0.0123  | administered | -0.3818 | -0.1915 | 0.1234  | solidarity | 0.1673  | 0.7088  | -0.6512 | steelers      | 0.4911  | 0.2074  | 0.0123 |
| musical     | 0.29    | 0.3383  | -1.1234 | borough      | 1.1643  | -1.4683 | 0.1234  | apec       | 0.214   | 0.4211  | -0.1612 | medalist      | 0.6142  | 0.6976  | 0.0123 |
| grandmother | 0.0414  | -0.1055 | 0.0123  | territorial  | 0.1781  | -0.9092 | 0.1234  | collective | 0.0147  | 0.117   | -1.0312 | linebacker    | 0.4323  | -0.1972 | 0.0123 |
| lover       | 0.0437  | -0.2838 | -0.0123 | choir        | -0.4242 | -0.0152 | -0.0123 | employ     | -0.0968 | -0.0932 | -0.2012 | cubs          | 0.1387  | 0.6647  | 0.0123 |
| princess    | -0.2385 | 0.0925  | 0.0123  | degrees      | -0.3126 | 0.2921  | -0.0123 | stick      | -0.6791 | 0.8881  | -0.5212 | quarterfinals | -0.5538 | 0.2093  | 0.0123 |

love - hate — Per-Dimension Summary (mean, median, std, var)

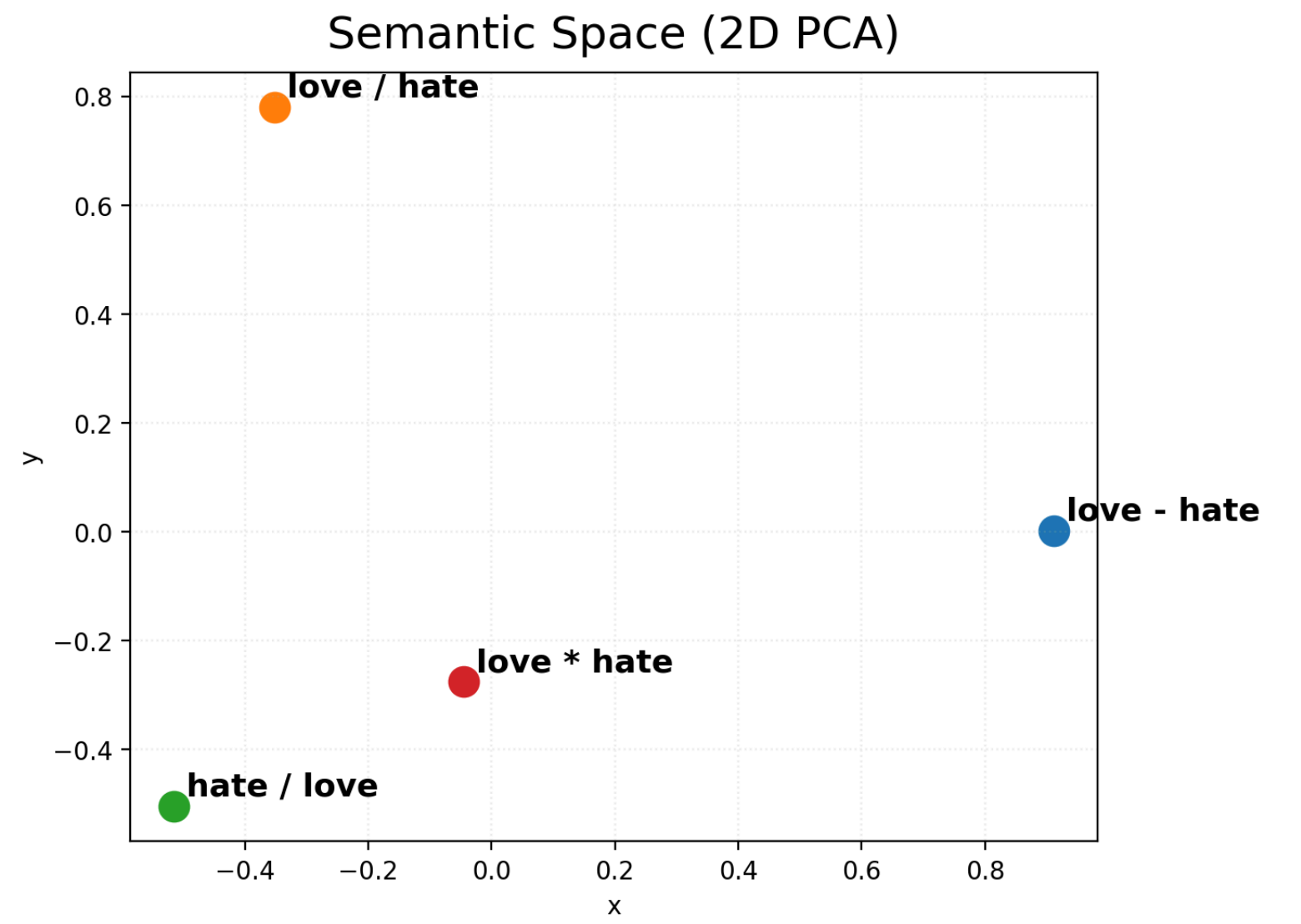
love / hate — Per-Dimension Summary (mean, median, std, var)

hate / love — Per-Dimension Summary (mean, median, std, var)

love \* hate — Per-Dimension Summary (mean, median, std, var)

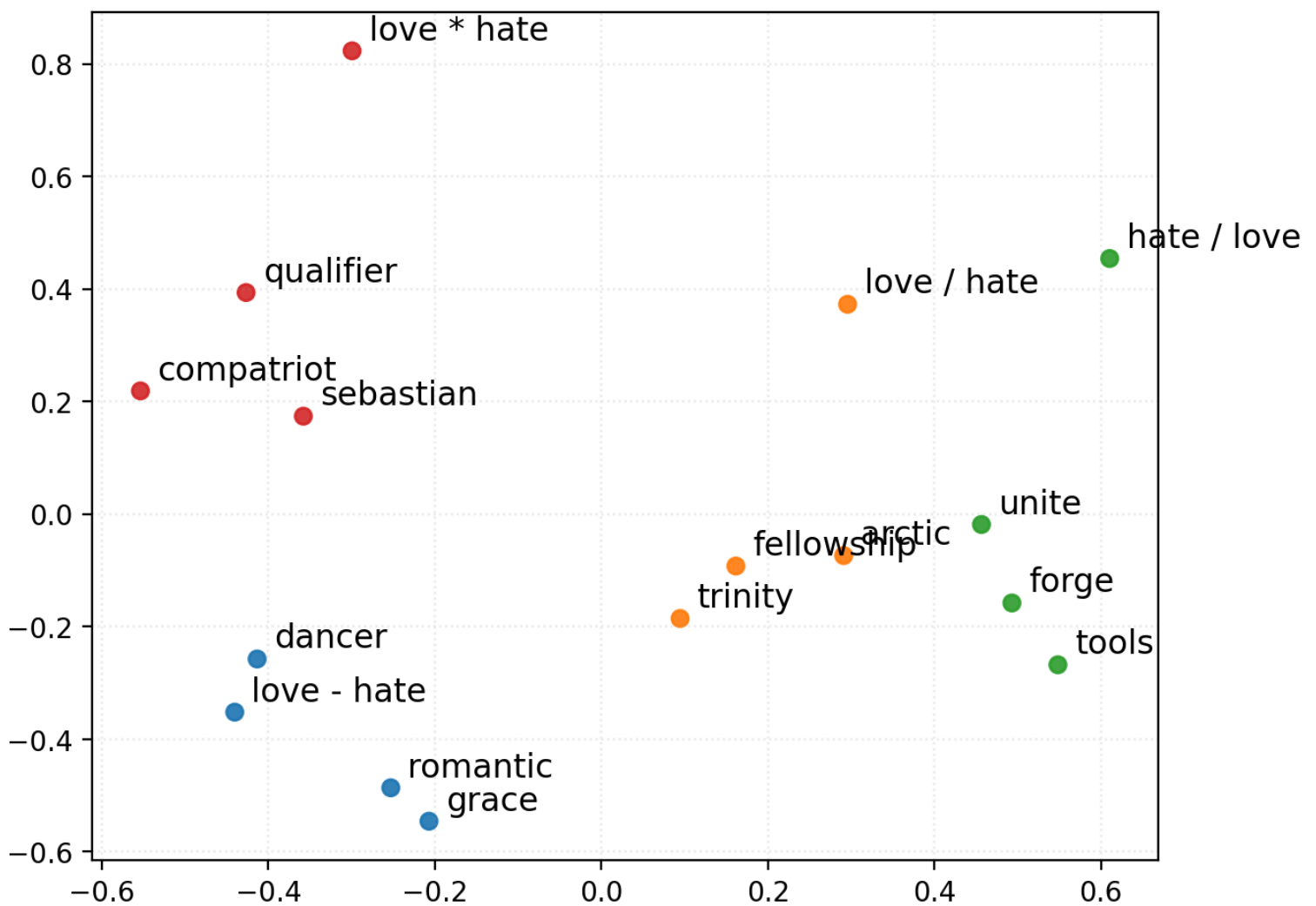
|        | mean    | median  | std |        | mean    | median  | std |        | mean    | median  | std |        | mean    | median  | std |
|--------|---------|---------|-----|--------|---------|---------|-----|--------|---------|---------|-----|--------|---------|---------|-----|
| dim_1  | 0.0604  | 0.0782  | 0.1 | dim_1  | 0.0897  | 0.0094  | 0.6 | dim_1  | 0.0678  | 0.1204  | 0.5 | dim_1  | -0.0759 | -0.0393 | 0.5 |
| dim_2  | 0.0522  | -0.0065 | 0.2 | dim_2  | -0.469  | -0.3341 | 0.4 | dim_2  | 0.3331  | 0.17    | 0.3 | dim_2  | 0.2815  | 0.2084  | 0.4 |
| dim_3  | -0.3507 | -0.2233 | 0.6 | dim_3  | 0.1695  | 0.1844  | 0   | dim_3  | -0.4574 | -0.3694 | 0   | dim_3  | 0.7937  | 0.724   | 0.5 |
| dim_4  | 0.2848  | 0.3325  | 0.4 | dim_4  | 0.2306  | 0.141   | 0.6 | dim_4  | 0.1094  | 0.2079  | 0.4 | dim_4  | -0.123  | -0.0967 | 0.5 |
| dim_5  | -0.0085 | -0.0283 | 0.3 | dim_5  | -0.0027 | 0.0752  | 0.3 | dim_5  | -0.0667 | -0.0005 | 0.3 | dim_5  | 0.0344  | -0.0309 | 0.4 |
| dim_6  | 0.3657  | 0.3743  | 0.3 | dim_6  | 0.2486  | 0.163   | 0.4 | dim_6  | 0.1591  | 0.1854  | 0.4 | dim_6  | 0.0334  | 0.025   | 0.3 |
| dim_7  | 0.0302  | 0.1065  | 0.3 | dim_7  | 0.1263  | 0.1774  | 0.3 | dim_7  | 0.2828  | 0.346   | 0.4 | dim_7  | -0.2479 | -0.2547 | 0.5 |
| dim_8  | 0.1988  | 0.0248  | 0.4 | dim_8  | -0.2803 | -0.158  | 0.6 | dim_8  | 0.0508  | 0.0293  | 0   | dim_8  | -0.294  | -0.245  | 0.6 |
| dim_9  | 0.1341  | 0.1158  | 0.1 | dim_9  | 0.1136  | 0.3001  | 0.6 | dim_9  | 0.0596  | -0.0407 | 0.5 | dim_9  | 0.6258  | 0.6369  | 0.3 |
| dim_10 | 0.1147  | 0.115   | 0.3 | dim_10 | 0.1525  | 0.1657  | 0.5 | dim_10 | -0.304  | -0.1301 | 0.5 | dim_10 | 0.1215  | 0.1069  | 0.2 |
|        |         |         |     |        |         |         |     |        |         |         |     |        |         |         |     |

Semantic Space (2D PCA)



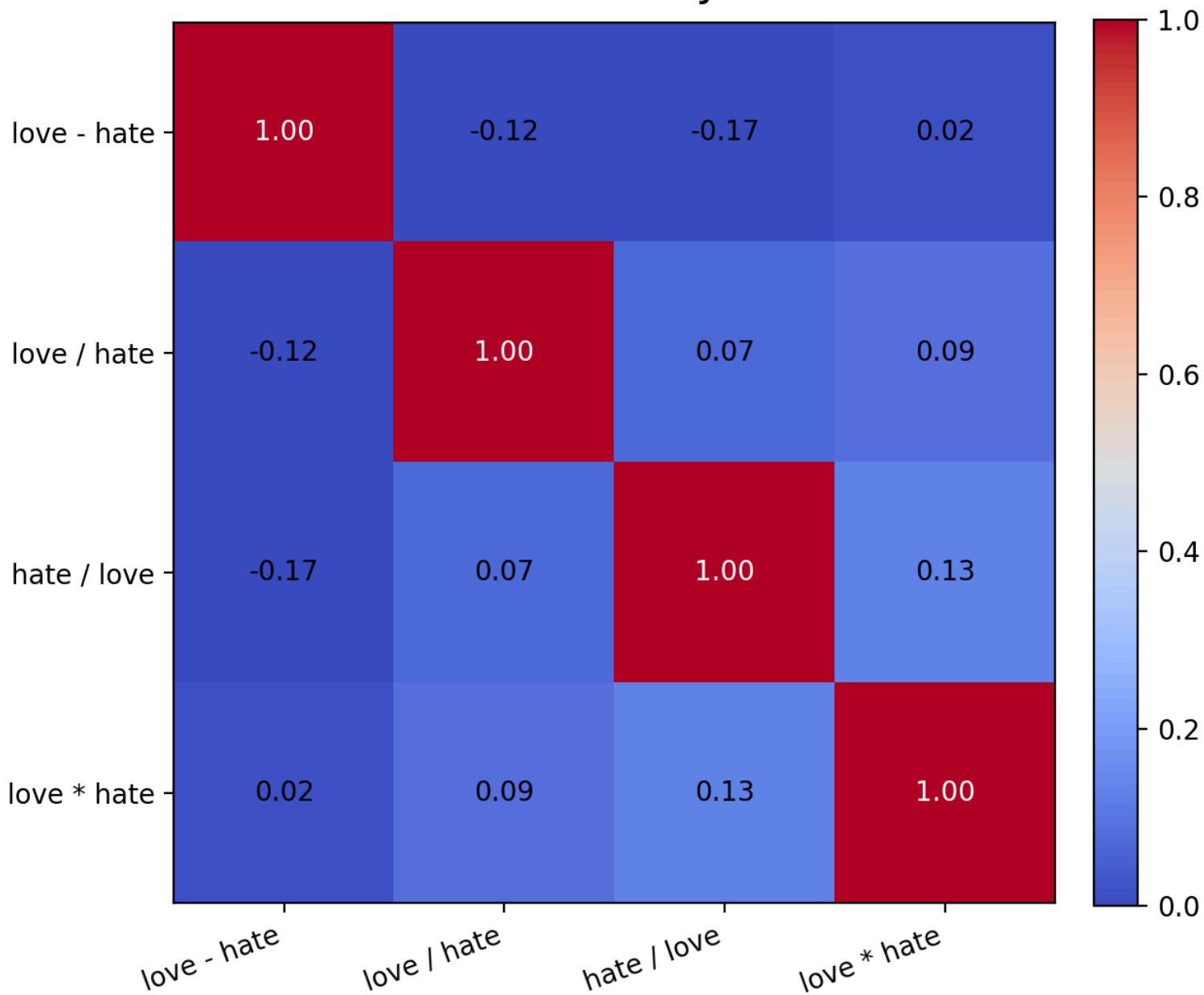
PCA Projection (Equations + Top-3 Words)

## PCA Projection (Equations + Top-3 Words)



## Cosine Similarity Matrix (Equations)

# Cosine Similarity Matrix



Loaded 10,000 words from [glove\\_top10k\\_100d.txt](#) — vectors: 100 dims.