

# Word Embeddings Evaluation Report

This report compares the performance of different word embedding methods across multiple evaluation metrics.

## Overview

Number of methods compared: 2

Total evaluations: 64

## Performance Summary

### SimLex-Correlation

#### Co-occurrence

Mean: 0.483

Std: 0.297

Range: [0.007, 0.994]

#### Neural

Mean: 0.756

Std: 0.159

Range: [0.531, 0.896]

### WordSim-Correlation

#### Co-occurrence

Mean: 0.581

Std: 0.288

Range: [0.026, 0.977]

## **Neural**

Mean: 0.615

Std: 0.406

Range: [0.008, 0.863]

## **Analogy-Accuracy**

### **Co-occurrence**

Mean: 0.256

Std: 0.142

Range: [0.000, 0.333]

## **Neural**

Mean: 0.333

Std: 0.000

Range: [0.333, 0.333]

## Clustering-Silhouette

### Co-occurrence

Mean: 0.202

Std: 0.219

Range: [-0.016, 0.824]

### Neural

Mean: -0.001

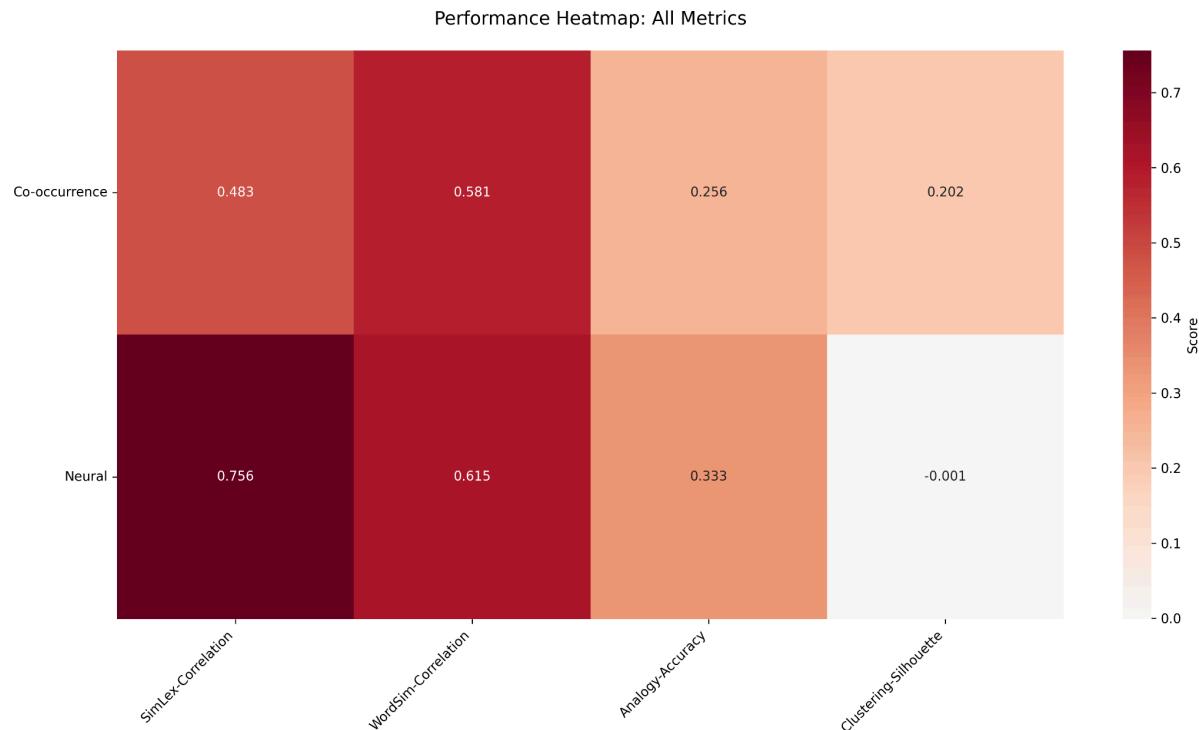
Std: 0.017

Range: [-0.013, 0.023]

# Visualizations

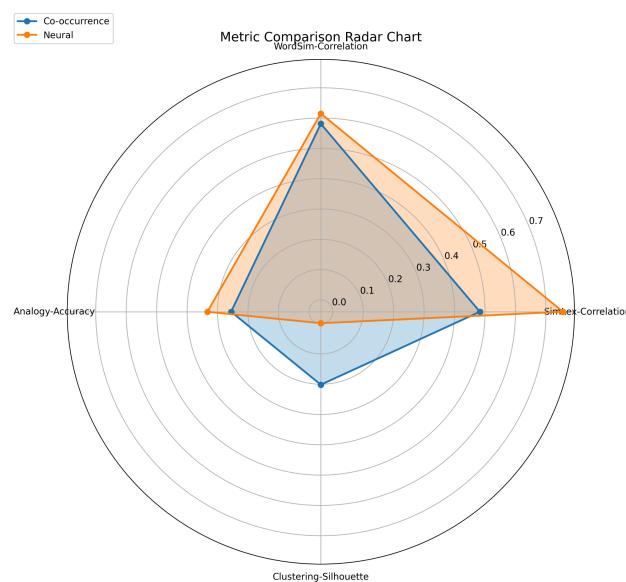
## Performance Heatmap

Heatmap showing the average performance of each method across all metrics.



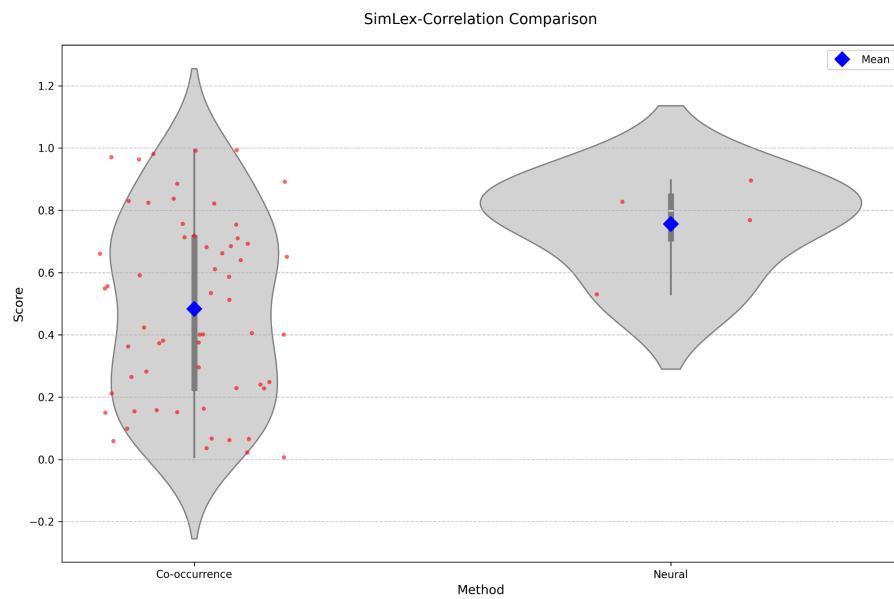
## Radar Chart Comparison

Radar chart comparing the relative strengths of each method across metrics.



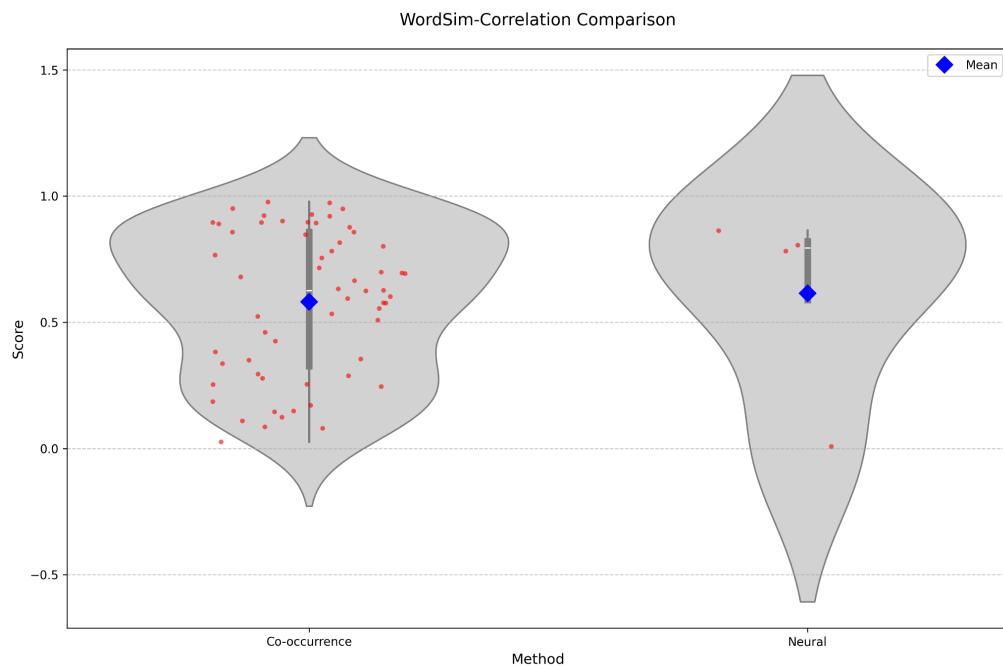
## SimLex-Correlation Distribution

Distribution of SimLex-Correlation scores across methods, showing individual data points, means, and overall spread.



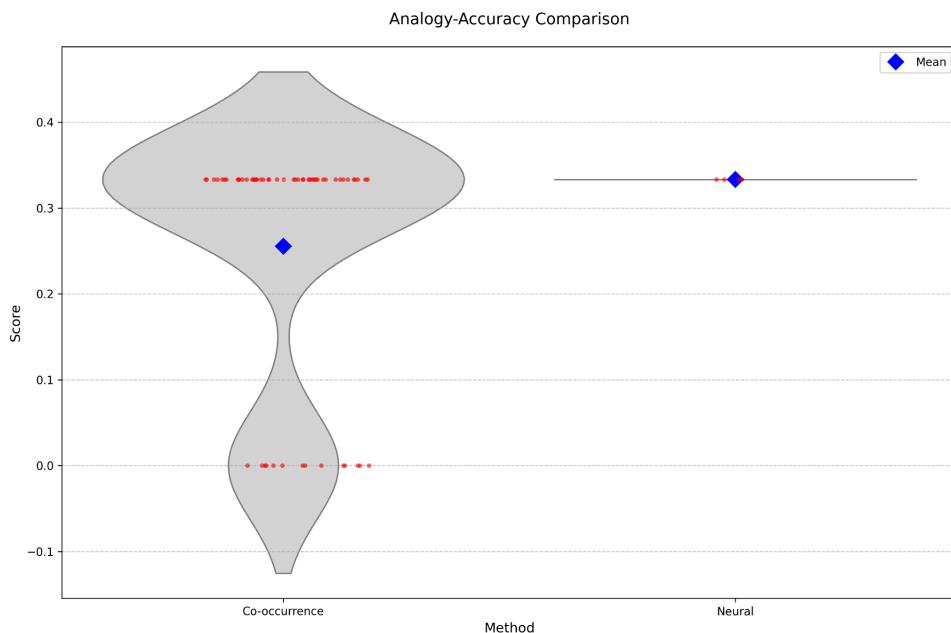
## WordSim-Correlation Distribution

Distribution of WordSim-Correlation scores across methods, showing individual data points, means, and overall spread.



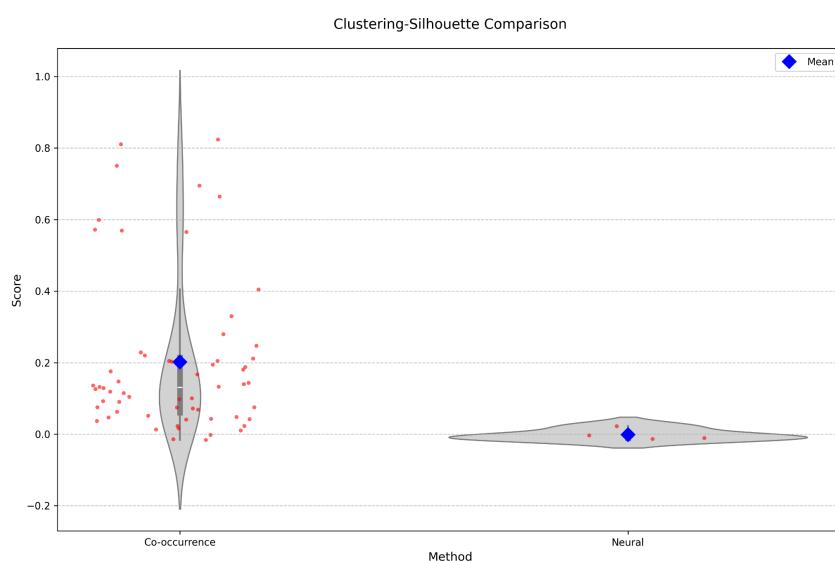
## Analogy-Accuracy Distribution

Distribution of Analogy-Accuracy scores across methods, showing individual data points, means, and overall spread.



## Clustering-Silhouette Distribution

Distribution of Clustering-Silhouette scores across methods, showing individual data points, means, and overall spread.



## Detailed Statistics

<b>Method</b>	<b>Metric</b>	<b>Mean</b>	<b>Std Dev</b>	<b>Min</b>	<b>Max</b>
Co-occurrence	<i>SimLex-Correlation</i>	0.483	0.297	0.007	0.994
Co-occurrence	<i>WordSim-Correlation</i>	0.581	0.288	0.026	0.977
Co-occurrence	<i>Analogy-Accuracy</i>	0.256	0.142	0.000	0.333
Co-occurrence	<i>Clustering-Silhouette</i>	0.202	0.219	-0.016	0.824
Neural	<i>SimLex-Correlation</i>	0.756	0.159	0.531	0.896
Neural	<i>WordSim-Correlation</i>	0.615	0.406	0.008	0.863
Neural	<i>Analogy-Accuracy</i>	0.333	0.000	0.333	0.333
Neural	<i>Clustering-Silhouette</i>	-0.001	0.017	-0.013	0.023