Adjusted Euclidean Distance

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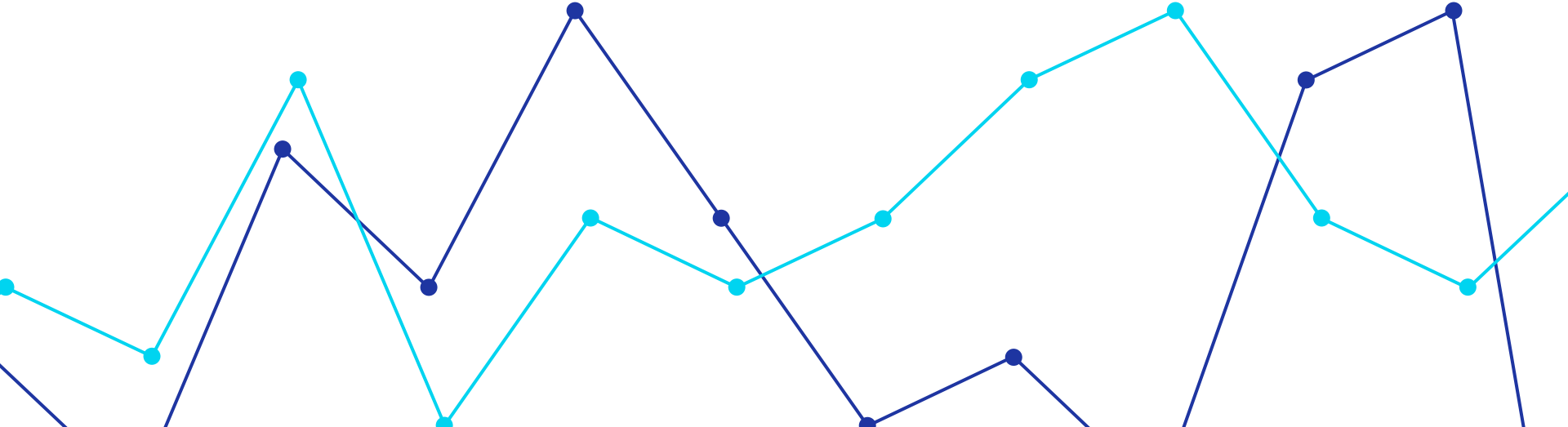
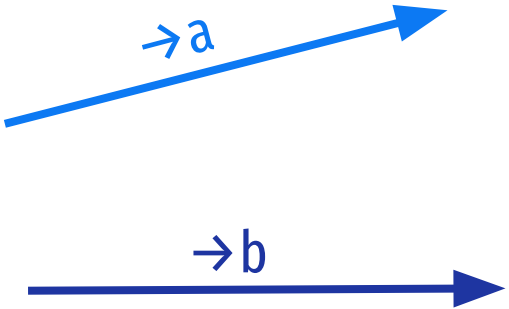
I certify that this is all my own original work. If I took any parts from elsewhere, then they were non-essential parts of the assignment, and they are clearly attributed in our submission. I will show I agree to this honor code by typing “Yes”: *Yes*



Why Adjusted Euclidean Distance works?



- AED uses the direction, the length of the vector and number of dimensions of vector spaces
- Makes results more meaningful
- Uses normalization to avoid biases with scale

How Adjusted Euclidean Distance works?

- AED uses the direction, the length of the vector and number of dimensions of vector spaces
- Makes results more meaningful
- Uses normalization to avoid biases with scale
- Find top K most similar users (excluding itself) and make predictions

Comparison of Results

User-User KNN Based Collaborative Filtering with Centred Cosine Similarity (without significance weighting)

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==================== The MAE and RMSE of Centred Cosine ====================
User_MAE: 0.824995261415729, User_RMSE: 1.0601936584102574
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User-User KNN Based Collaborative Filtering with Adjusted Euclidean Distance

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==================== The MAE and RMSE of Your Implementation ====================
MAE: 0.7338597942106887, RMSE: 0.9419625815142503
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Thank you for listening!