**Individual Assignment 1**

1. **Why in general, lift is a preferred metric to co-occurrence in building a MDS map?**

In general, it is easier to compare data with the same scale. Lifting, by comparing probability rather than absolute values, can normalize data and thus transform the data into the same scale.

1. **Run the program. Save the MDS map you get. Based on the MDS map you’ve got from the sample product category and brands (the top 20 brands in the all “All-Beauty” category in terms of numbers of review), discuss the potential cons of building a perceptual map using our proposed method (using co-occurrence or lift to proxy similarity).**

Chart

Description automatically generated

1. The first drawback is that by counting the co-occurrence without more detailed criteria, the top-20 can be chosen from different subcategories when they are not direct competitors at all.
2. The Y-axis and X-axis do not tell any specific to audience and thus cause some confusion for interpretation.
3. **Based on your suggestion above, can you give one example of a list of brands (8~20 brands) on which our proposed method is suitable to build a perceptual map? Provide the rationale of your brand selection.**

When brands compete by differentiating themselves to tap niche market, they’re not necessarily competitors. Therefore, we should choose brands from a specific subcategory where competition is high.

If we use the current dataset of Allbeauty, then we should choose a specific subcategory, like makeup. My proposed list would be:

* LA Girl USA Cosmetics
* NARS
* E.L.F
* L Oreal Paris
* Clinique
* Etude House
* Estee Lauder
* NYX
* KISS
* Garnier
* Dove

Telecom companies don't have the opportunity to gain access to new untapped customers. Therefore, they compete aggressively to gain their peers' market shares in their customer segments. They would also made good candidates for lifting method:

* AT&T
* Verizon Communications
* Comcast Corporation
* Charter Communications
* T-Mobile USA
* Sprint Corporation
* CenturyLink
* Dish Network
* Cox Communications
* US Cellular