Principal Components: BiPlots

Multivariate Solutions
Principal Components: BiPlots

- Biplots are statistical graphics that represent in the same plane both the variables and the cases. Usually variables are represented by arrows, while points represent cases.

- Practically speaking, a BiPlot is a visual factor analysis.
  - Points that are close together correspond to observations that have similar scores on the components displayed in the plot.

- In the following example, restaurants that are close together are ones that have similar profiles of preference:
  - Most respondents have the same kind of preference ratings for Wendy’s and McDonald's. Whether or not they like them we don't know, it's just that if a respondent likes one s/he tends to like the other, and if a respondent dislikes one, then the other is likely to be disliked.
  - The same is true for Joe's Grub and Chili's, although the judgments about Joe's Grub and Chili's are likely to be rather different than those about Wendy's and McDonald's, since the two pairs of points are relatively far apart.
BiPlots

Please Rate Your Preference for Each Restaurant

- McDonalds
- Wendy's
- Burger King
- Bush Jr's
- Joe's Grub
- Chili's
- Canyon Café
- Dave and Buster's
- Le Pain Quotidien
- Golden Krust Caribbean Bakery
- Chesapeake Bagel Bakery
- Fast Food
- Casual Dining Theme
- Specialty Bakery
BiPlots

Please Rate Your Preference for Each Restaurant

Restaurants
1 Delivery
2 Drive Thru
3 Eat at Home
4 Mall Restaurant
5 Sit Down
6 Take Out
7 Atmosphere
8 Clean
9 Cozy
10 Old
11 Fun
12 Comfortable
13 Uncomfortable
14 Unclean
15 Sterile
16 Convenient
17 On the Road
18 After Work
19 Dinner
20 Lunch
21 Lunch Day Off
22 Snack
23 Morning

Restaurants
24 Big Chains
25 Fast Fuel
26 Fast
27 Quick
28 Cheap
29 Limited Menu
30 Healthier
31 Better Quality
32 Fresh
33 Fried
34 Great Taste
35 Higher End
36 Warm Food
37 Local
38 Unique
39 Substantial
40 Variety
41 Grocery
42 One at a Time
43 For Family
44 My Favorite
45 For Kids