

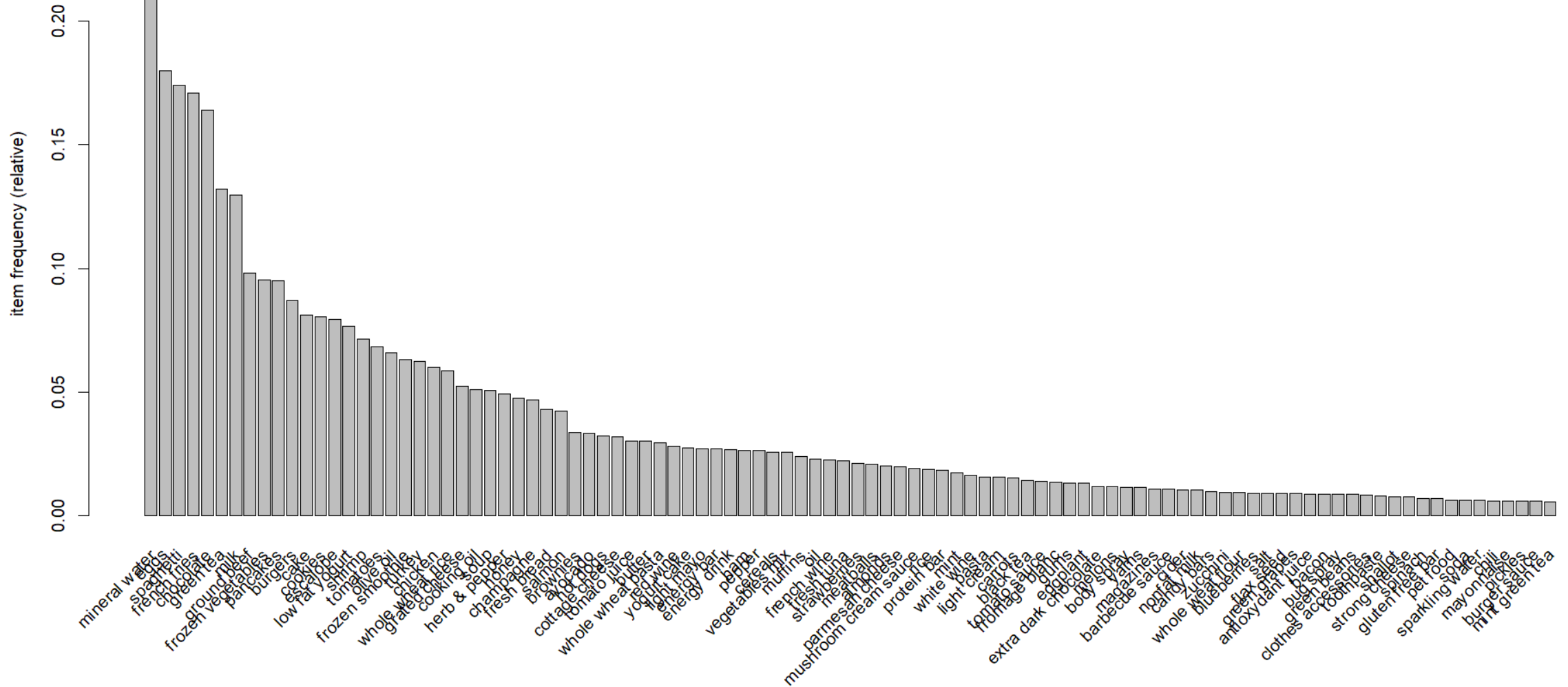
MARKET BASKET OPTIMISATION

Association Rule Learning : Apriori and Eclat

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APRIORI :

Item Frequency Plot (Top 100)



VISUALISING ASSOCIATION:

support = 0.003, confidence = 0.2

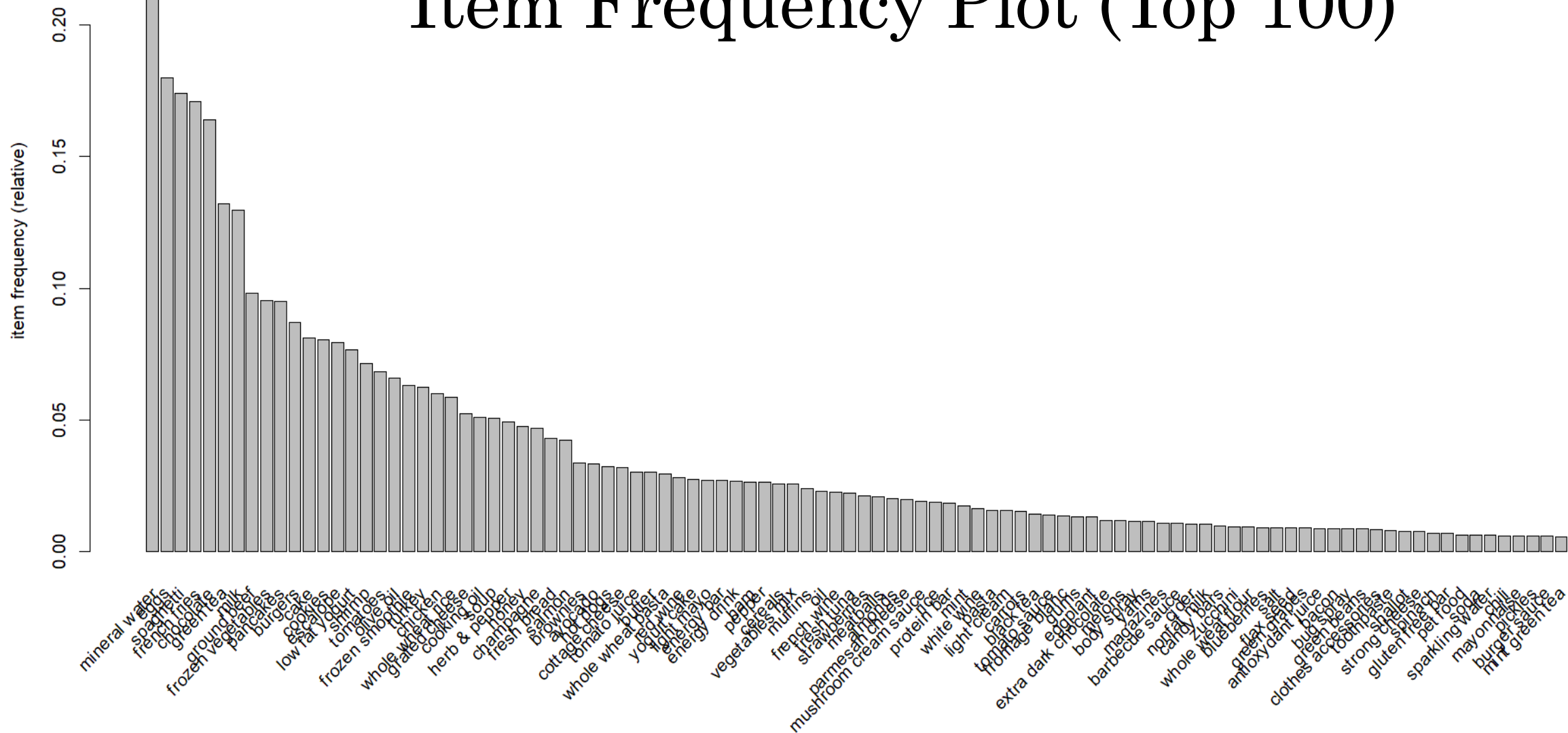
#	LHS	RHS	Support	Confidence	Coverage	Lift	Count
1	{mineral water, whole wheat pasta}	{olive oil}	0.003866151	0.4027778	0.009598720	6.115863	29
2	{frozen vegetables, milk, mineral water}	{soup}	0.003066258	0.2771084	0.011065191	5.484407	23
3	{fromage blanc}	{honey}	0.003332889	0.2450980	0.013598187	5.164271	25
4	{spaghetti, tomato sauce}	{ground beef}	0.003066258	0.4893617	0.006265831	4.980600	23
5	{light cream}	{chicken}	0.004532729	0.2905983	0.015597920	4.843951	34
6	{pasta}	{escalope}	0.005865885	0.3728814	0.015731236	4.700812	44
7	{french fries, herb & pepper}	{ground beef}	0.003199573	0.4615385	0.006932409	4.697422	24
8	{cereals, spaghetti}	{ground beef}	0.003066258	0.4600000	0.006665778	4.681764	23
9	{frozen vegetables, mineral water, soup}	{milk}	0.003066258	0.6052632	0.005065991	4.670863	23
10	{french fries, ground beef}	{herb & pepper}	0.003199573	0.2307692	0.013864818	4.665768	24

Terms..

- **#:** Rule number or index.
- **LHS:** The left-hand side of the rule, which is the antecedent or the set of items that are found together.
- **RHS:** The right-hand side of the rule, which is the consequent or the item that is predicted to be associated with the items on the left-hand side.
- **Support:** The proportion of transactions in the dataset that contain both the items on the left-hand side and the right-hand side of the rule.
- **Confidence:** The likelihood that the right-hand side (RHS) of the rule will be bought when the left-hand side (LHS) is bought. It is the ratio of $\text{Support}(\text{LHS} \cap \text{RHS})$ to $\text{Support}(\text{LHS})$.
- **Coverage:** The proportion of transactions in the dataset that contain the items on the left-hand side of the rule.
- **Lift:** The ratio of Confidence to the expected Confidence if the items on the left-hand side and the right-hand side were independent of each other.
- **Count:** The number of transactions that support the rule.

ECLAT :

Item Frequency Plot (Top 100)



VISUALISING ASSOCIATION:

support = 0.003, minlen = 2

#	Items	Support	Count
1	{mineral water, spaghetti}	0.05972537	448
2	{chocolate, mineral water}	0.05265965	395
3	{eggs, mineral water}	0.05092654	382
4	{milk, mineral water}	0.04799360	360
5	{ground beef, mineral water}	0.04092788	307
6	{ground beef, spaghetti}	0.03919477	294
7	{chocolate, spaghetti}	0.03919477	294
8	{eggs, spaghetti}	0.03652846	274
9	{eggs, french fries}	0.03639515	273
10	{frozen vegetables, mineral water}	0.03572857	268