

## Week 09 Prove - Assignment

1. Please list the 5 rules you found with the highest support.

lhs	rhs	support	confidence	lift
[1] {other vegetables}	=> {whole milk}	0.07483477	0.3867578	1.513634
[2] {whole milk}	=> {other vegetables}	0.07483477	0.2928770	1.513634
[3] {rolls/buns}	=> {whole milk}	0.05663447	0.3079049	1.205032
[4] {yogurt}	=> {whole milk}	0.05602440	0.4016035	1.571735
[5] {root vegetables}	=> {whole milk}	0.04890696	0.4486940	1.756031

2. Please list the 5 rules you found with the highest confidence.

lhs	rhs	support	confidence	lift	count
[1] {butter, whipped/sour cream}	=> {whole milk}	0.006710727	0.6600000	2.583008	66
[2] {butter, yogurt}	=> {whole milk}	0.009354347	0.6388889	2.500387	92
[3] {root vegetables, butter}	=> {whole milk}	0.008235892	0.6377953	2.496107	81
[4] {tropical fruit, curd}	=> {whole milk}	0.006507372	0.6336634	2.479936	64
[5] {tropical fruit, butter}	=> {whole milk}	0.006202339	0.6224490	2.436047	61

3. Please list the 5 rules you found with the highest lift.

lhs	rhs	support	confidence	lift	count
[1] {herbs}	=> {root vegetables}	0.007015760	0.4312500	3.956477	69
[2] {berries}	=> {whipped/sour cream}	0.009049314	0.2721713	3.796886	89
[3] {tropical fruit, other vegetables, whole milk}	=> {root vegetables}	0.007015760	0.4107143	3.768074	69
[4] {beef, other vegetables}	=> {root vegetables}	0.007930859	0.4020619	3.688692	78
[5] {tropical fruit, other vegetables}	=> {pip fruit}	0.009456024	0.2634561	3.482649	93

4. Please list the 5 rules you found that you think are the most interesting.

{tropical fruit, other vegetables}	=> {pip fruit}	0.009456024	0.2634561	3.482649	93
{tropical fruit, other vegetables, whole milk}	=> {yogurt}	0.007625826	0.4464286	3.200164	75
{soft cheese}	=> {other vegetables}	0.007117438	0.4166667	2.153398	70
{beef, whole milk}	=> {rolls/buns}	0.006812405	0.3205742	1.742867	67
{yogurt, bottled water}	=> {soda}	0.007422471	0.3230088	1.852357	73

5. Please describe anything else you did for this assignment.

We used an online retail dataset to find the interesting rules that were to be found. What was most interesting though is that some rules had a confidence of 1, which probably meant that the items were offered as a bundle or something.

6. Please select the category you feel best describes your assignment:

A - Some attempt was made

B - Developing, but significantly deficient

C - Slightly deficient, but still mostly adequate

D - Meets requirements

E - Shows creativity and excels above and beyond requirements ←

7. Provide a brief justification (1-2 sentences) for selecting that category.

I think our extra piece of work to find the other dataset, clean it, turn it into a transaction set, and follow the same procedure as for the Groceries dataset counts as excelling about and beyond requirements.