Symptom-Disease Association Mapping summary

I worked on a dataset with 43778 rows & 7 columns, below is a sample (first 10 rows).

Animal A	٩ge	Temperature	Symptom 1	Symptom 2	Symptom 3	Disease
Cow 3	3	103.1	Depression	Painless lumps	Loss of appetite	Pneumonia
Buffalo 1	L3	104.5	Painless lumps	Loss of appetite	Depression	Lumpy virus
Sheep 1	L	100.5	Depression	Painless lumps	Loss of appetite	Lumpy virus
Cow 1	L4	100.3	Loss of appetite	Swelling in limb	Crackling sound	Blackleg
Sheep 2	2	103.6	Painless lumps	Loss of appetite	Depression	Pneumonia
Goat 1	LO	101.2	Loss of appetite	Blisters on gums	Difficulty walking	Foot and mouth
Sheep 6	5	103.3	Loss of appetite	Depression	Painless lumps	Lumpy virus
Goat 6	5	101.7	Difficulty walking	Blisters on tongue	Loss of appetite	Foot and mouth
Buffalo 9	9	102.5	Depression	Painless lumps	Loss of appetite	Lumpy virus
Goat 3	3	102.7	Lameness	Blisters on mouth	Loss of appetite	Foot and mouth

Four distinct Animal types

Total number of cows: 11254

Total number of buffalo: 11238

Total number of sheep: 10658

Total number of goat: 10628

Cows Dataset Information:

Total number of cow entries: 11254

Types of Diseases in the Dataset:

- 1. Pneumonia
- 2. blackleg
- 3. lumpy virus
- 4. anthrax
- 5. foot and mouth Disease

Total number of different symptoms in the dataset: 24

Total Frequency of Top 5 Symptoms

✓ loss of appetite: 7825 occurrences

√ depression: 5357 occurrences

✓ painless lumps: 3869 occurrences

√ difficulty walking: 1968 occurrences

✓ lameness: 1929 occurrences

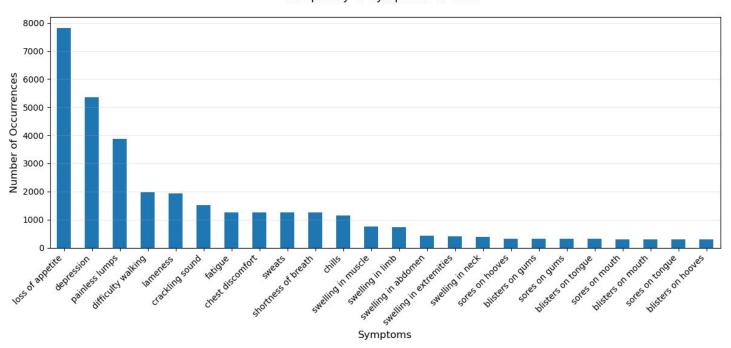
Primary Symptom (Symptom 1) Distribution:

1. loss of appetite: 2608 cases

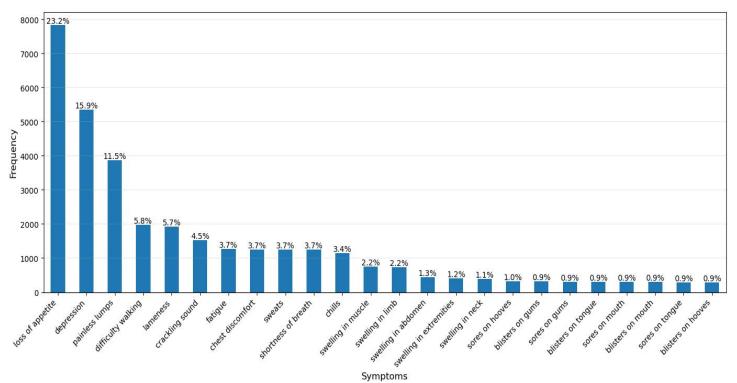
2. depression: 1801 cases

- 3. painless lumps: 1258 cases4. difficulty walking: 680 cases
- 5. lameness: 646 cases

Frequency of Symptoms in Cows



Symptom Distribution in Cow Population



Symptom 1-Disease Relationship Heatmap

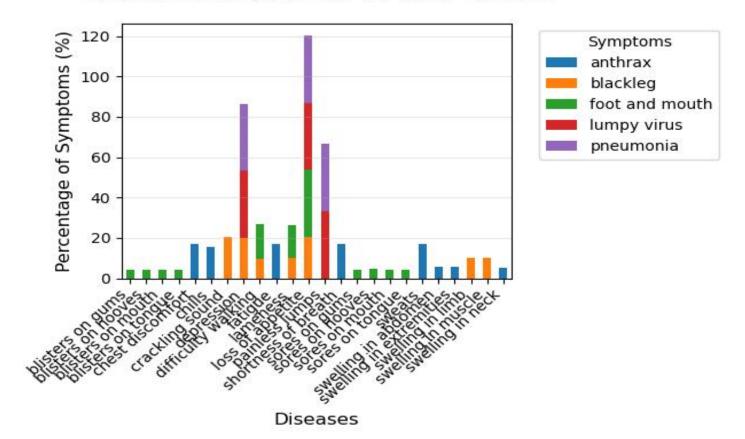
			ره ^{o°} Diseases	(200)	lot.
	anthat	backles	God and mouth	umpy with	presmonia
swelling in neck -		0	0	0	0
swelling in muscle -	0	748	0	0	0
swelling in limb -	0	740	0	0	0
swelling in extremities -	413	0	0	0	0
swelling in abdomen -	436	0	0	0	0
sweats -		0	0	0	0
sores on tongue -		0	293	0	0
sores on mouth -		0	305	0	0
sores on hooves -		0	325	0	0
sores on gums -	242745	0	307	0	0
painless lumps - shortness of breath -		0	0	0	1955
loss of appetite -		0	2433	1914	1955
lameness -		741	1188	0	0
fatigue -	The state of the s	0	0	0	0
difficulty walking -		723	1245	0	0
depression -	0	1488	0	1914	1955
crackling sound -	0	1519	0	0	0
chills -	1140	0	0	0	0
chest discomfort -	1250	0	0	0	0
blisters on tongue -	- 0	0	306	0	0
blisters on mouth -	- 0	0	297	0	0
blisters on hooves -	0	0	288	0	0
blisters on gums -	- 0	0	312	0	0

Symptom 2 - Disease Relationship Heatmap

								- 800	
	blisters on gums -	0	0	112	0	0		800	
	blisters on hooves -	0	0	92	0	0			
	blisters on mouth -	0	0	102	0	0			
	blisters on tongue -	0	0	106	0	0		- 700	
	chest discomfort -		0	0	0	0			
	chills -	370	0	0	0	0			
	crackling sound -	0	495	0	0	0		- 600	ĺ
	depression -	0	506	0	637	683			
	difficulty walking -	0	228	418	0	0			
	fatigue -	419	0	0	0	0		- 500	
Secondary Symptoms	lameness -	0	249	403	0	0			0 0 Number of Cases
Symp	loss of appetite -	0	523	806	627	647			
dary	painless lumps -	0	0	0	650	625		- 400	
econ	shortness of breath -		0	0	0	0			N
S	sores on gums -	0	0	92	0	0			
	sores on hooves -	0	0	117	0	0		- 300	
	sores on mouth -	0	0	91	0	0			
	sores on tongue -	0	0	94	0	0			
	sweats -	421	0	0	0	0		- 200	
	swelling in abdomen -	153	0	0	0	0			
	swelling in extremities -	132	0	0	0	0			
	swelling in limb -	0	227	0	0	0		- 100	
	swelling in muscle -	0	266	0	0	0			
	swelling in neck -	131	0	0	0	0			
		attrat	blockes	Roc ^{t and} Mouth Diseases	Jungyants	de la		- 0	

			Symptom 3	- Disease Relationsh	ip Heatmap			
	blisters on gums -	0	0	92	0	0	4	- 800
	blisters on hooves -	0	0	95	0	0		
	blisters on mouth -	0	0	100	0	0		
	blisters on tongue -	0	0	100	0	0		- 700
	chest discomfort -		0	0	0	0		
	chills -	405	0	0	0	0		
	crackling sound -	0	505	0	0	0		- 600
	depression -	0	492	0	620	618		
	difficulty walking -	0	248	394	0	0		
	fatigue -	420	0	0	0	0		- 500
oms	lameness -	0	242	389	0	0		es
Tertiary Symptoms	loss of appetite -	0	496	823	636	659		- 00 Number of Cases
ary S	painless lumps -	0	0	0	658	678		- 400 ja
Terti	shortness of breath -		0	0	0	0		N
	sores on gums -	0	0	117	0	0		
	sores on hooves -	0	0	105	0	0		- 300
	sores on mouth -	0	0	117	0	0		
	sores on tongue -	0	0	101	0	0		
	sweats -	411	0	0	0	0		- 200
	swelling in abdomen -	142	0	0	0	0		
93	swelling in extremities -	139	0	0	0	0		
	swelling in limb -	0	254	0	0	0		- 100
	swelling in muscle -	0	257	0	0	0		
	swelling in neck -		0	0	0	0		- 0
		attrat	Hattad	Roc ^{t and} mouth Diseases	lungyvints	greentanis		U

Proportion of Symptoms for Each Disease



Distribution of Symptoms Across Diseases (Absolute Numbers)

