Tempreture profiling

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

Animal	Age	Temperature	Symptom 1	Symptom 2	Symptom 3	Disease
Cow	3	103.1	Depression	Painless lumps	Loss of appetite	Pneumonia
Buffalo	13	104.5	Painless lumps	Loss of appetite	Depression	Lumpy virus
Sheep	1	100.5	Depression	Painless lumps	Loss of appetite	Lumpy virus
Cow	14	100.3	Loss of appetite	Swelling in limb	Crackling sound	Blackleg
Sheep	2	103.6	Painless lumps	Loss of appetite	Depression	Pneumonia
Goat	10	101.2	Loss of appetite	Blisters on gums	Difficulty walking	Foot and mouth
Sheep	6	103.3	Loss of appetite	Depression	Painless lumps	Lumpy virus
Goat	6	101.7	Difficulty walking	Blisters on tongue	Loss of appetite	Foot and mouth
Buffalo	9	102.5	Depression	Painless lumps	Loss of appetite	Lumpy virus
Goat	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

Temperature Statistics by Disease

Temperature Statistics by Disease	Count	Mean	Std	Min	25%	50%	75%	Max
Anthrax	2458.0	102.24	1.39	100.0	101.1	102.1	103.3	105.0
Blackleg	2494.0	102.27	1.39	100.0	101.1	102.2	103.4	105.0
Foot and Mouth	2433.0	102.22	1.39	100.0	101.0	102.1	103.3	105.0
Lumpy Virus	1914.0	102.30	1.42	100.0	101.1	102.2	103.5	105.0
Pneumonia	1955.0	102.35	1.42	100.0	101.1	102.3	103.5	105.0

Detailed Temperature Analysis by Disease

Detailed Temperature Analysis by Disease	Mean Temperature	Median Temperature	Min Temperature
Anthrax	102.24	102.1	100.0
Blackleg	102.27	102.2	100.0
Foot and Mouth	102.22	102.1	100.0
Lumpy Virus	102.30	102.2	100.0
Pneumonia	102.35	102.3	100.0

Temperature Statistics by Disease (Celsius)

| Temperature Statistics by Disease (Celsius)	Count	Mean	Std	Min	25%	50%	75%	Max
Anthrax	2458.0	39.02	0.77	37.78	38.39	38.94	39.61	40.56
Blackleg	2494.0	39.04	0.77	37.78	38.39	39.00	39.67	40.56
Foot and Mouth	2433.0	39.01	0.77	37.78	38.33	38.94	39.61	40.56
Lumpy Virus	1914.0	39.05	0.79	37.78	38.39	39.00	39.72	40.56
Pneumonia	1955.0	39.08	0.79	37.78	38.39	39.06	39.72	40.56

Temperature Distribution by Disease (°C)
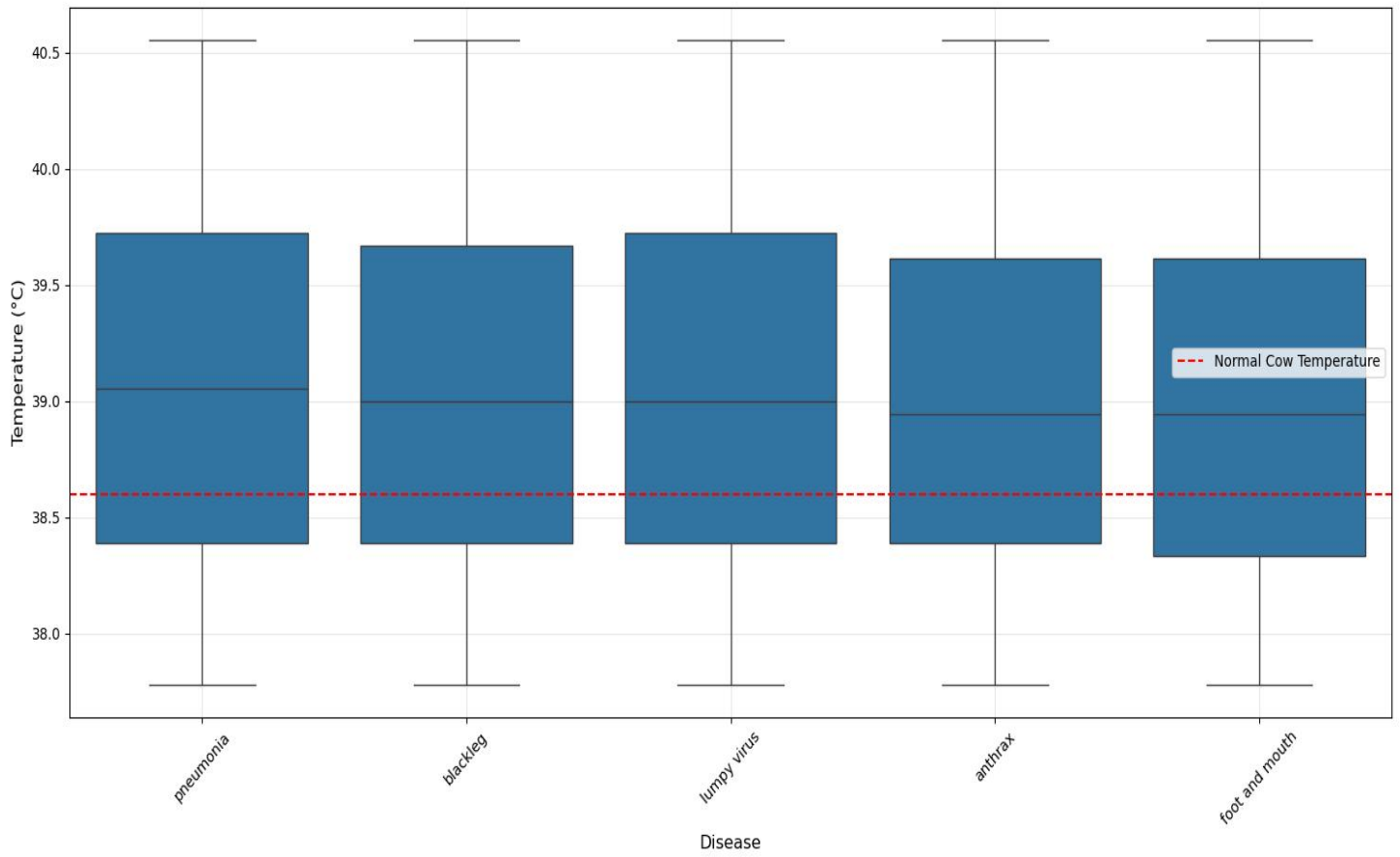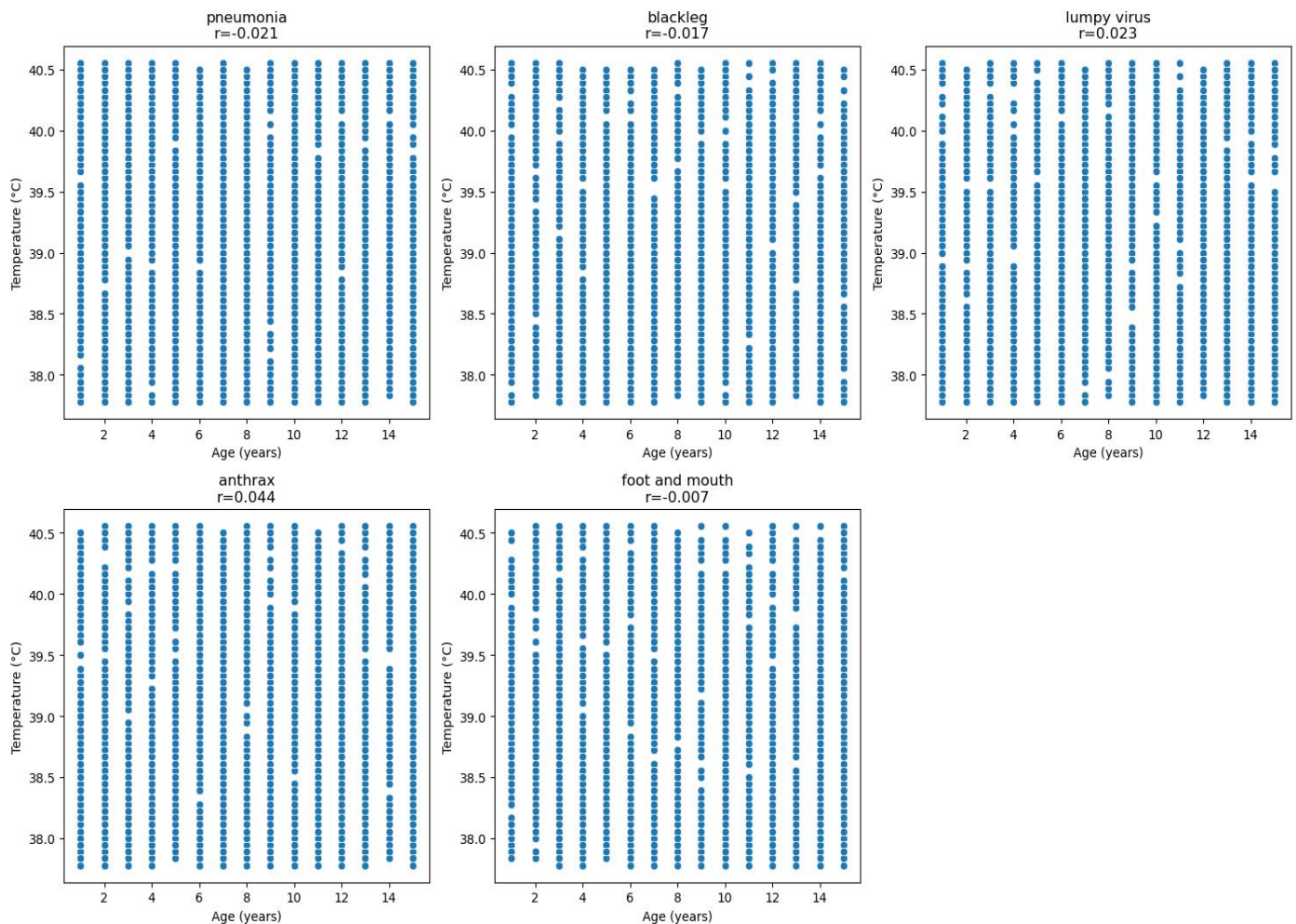

Detailed Temperature Distribution by Disease (°C)
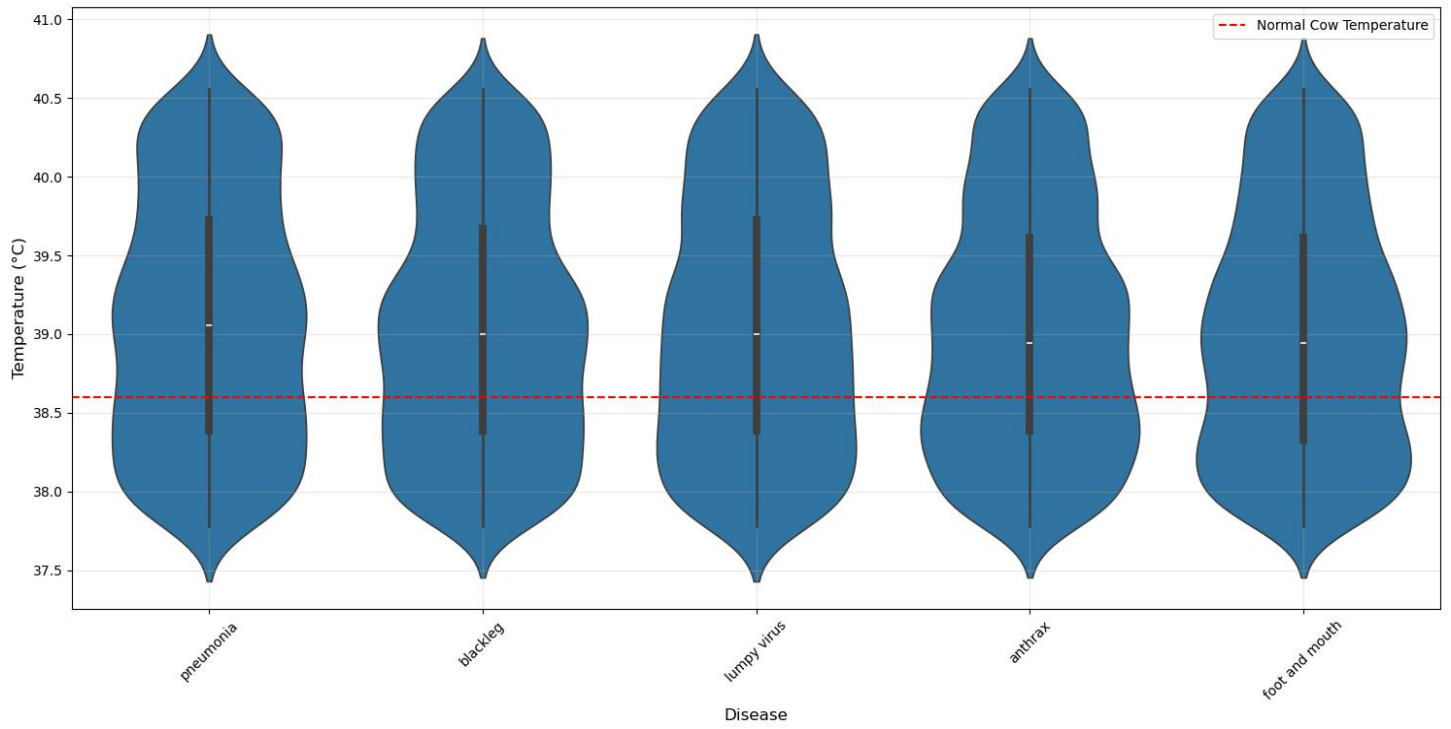
Ranking of Diseases by Mean Temperature (°C)
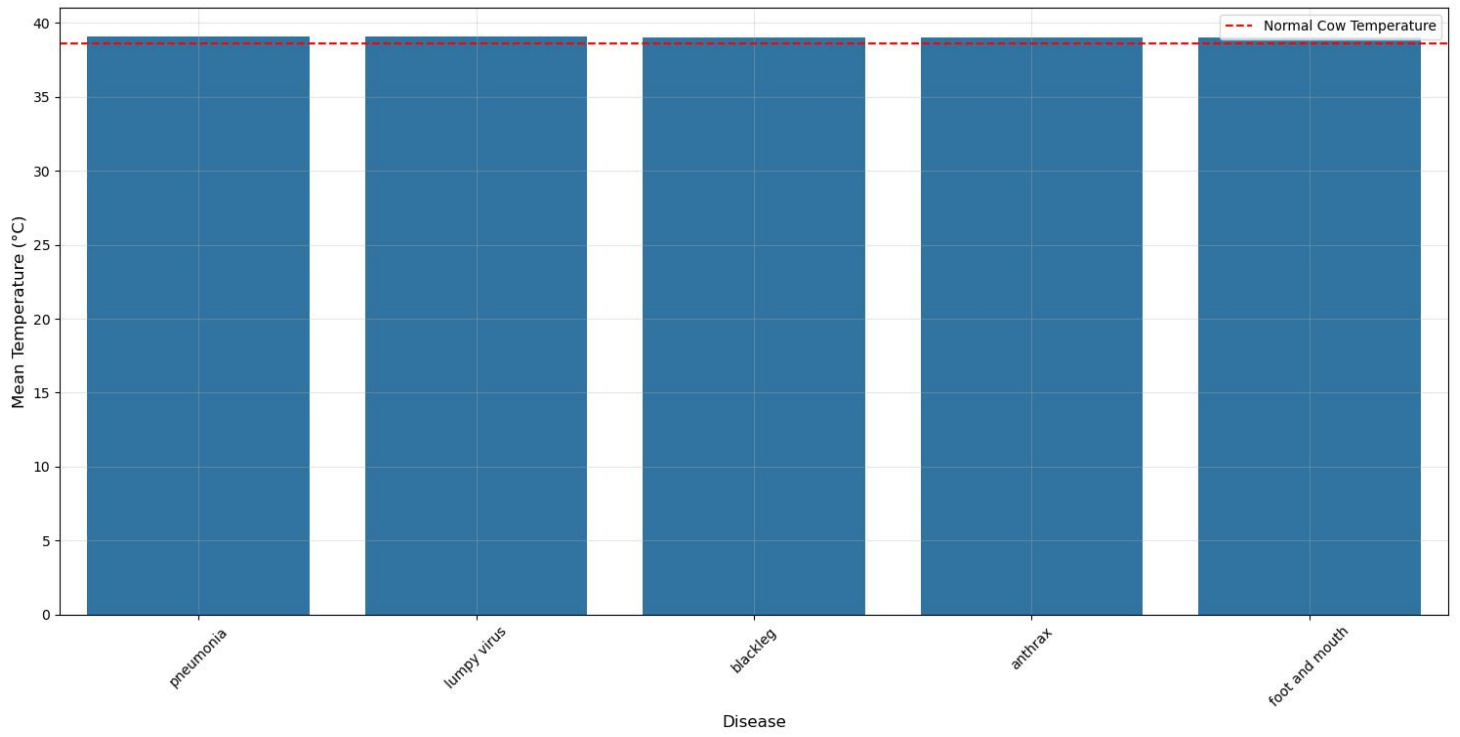
Ranking of Diseases by Median Temperature (°C)
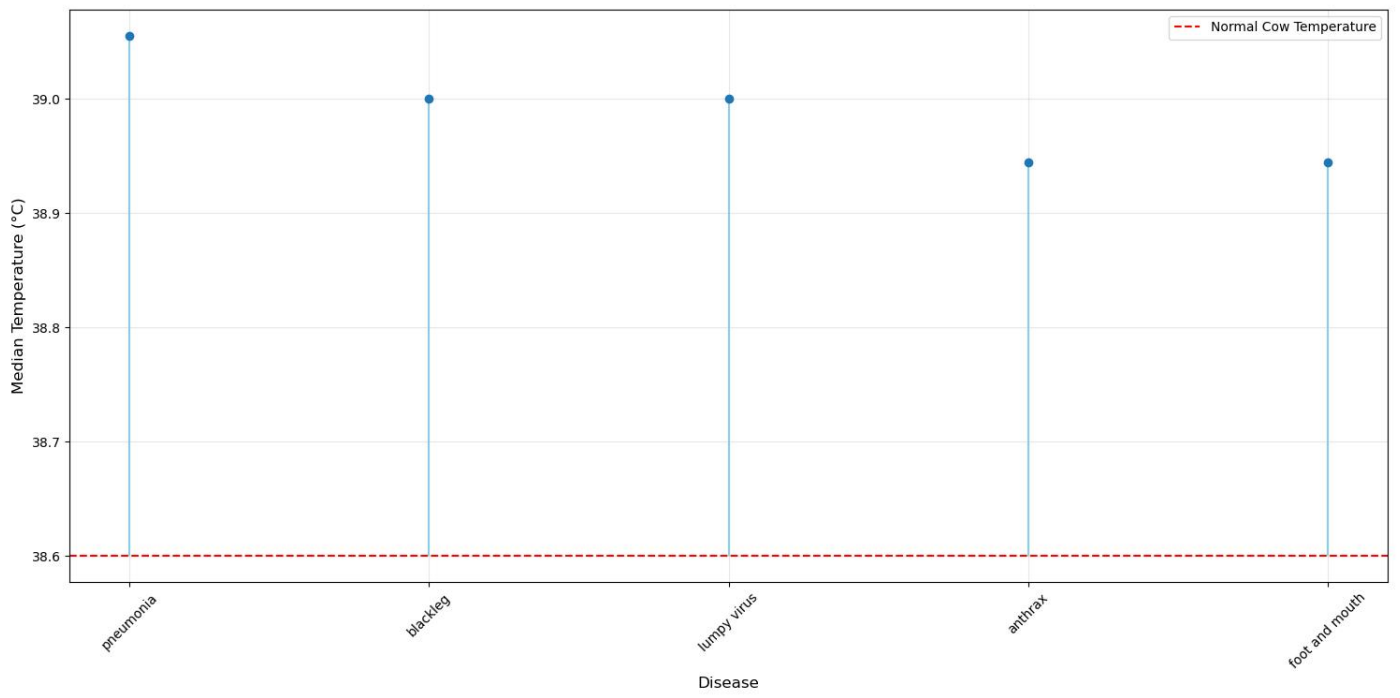
Temperature-Age Correlations by Disease:

pneumonia:
Pearson correlation: -0.021
Spearman correlation: -0.022

blackleg:
Pearson correlation: -0.017
Spearman correlation: -0.018

lumpy virus:
Pearson correlation: 0.023
Spearman correlation: 0.022

anthrax:
Pearson correlation: 0.044
Spearman correlation: 0.044

foot and mouth:
Pearson correlation: -0.007
Spearman correlation: -0.010

Explanation
- ✓ All the correlations are extremely close to zero (ranging from -0.022 to +0.044)
- ✓ This means there's essentially no relationship between an animal's age and its temperature when it has these diseases
- ✓ For example, with pneumonia (-0.021), there's a tiny tendency for older animals to have slightly lower temperatures, but it's so small it's practically meaningless
- ✓ Similarly, with anthrax (+0.044), there's a tiny tendency for older animals to have slightly higher temperatures, but again, it's negligible.

This analysis effectively shows that temperature changes in diseased cows are independent of their age, which is valuable for diagnostic purposes.