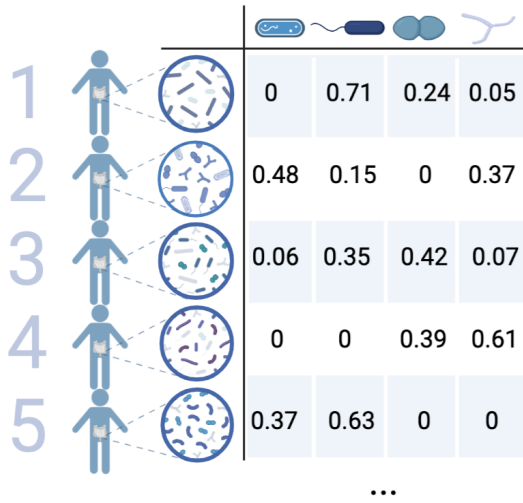
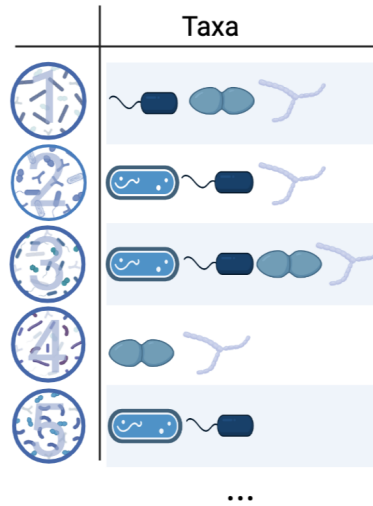


## Data pre-processing

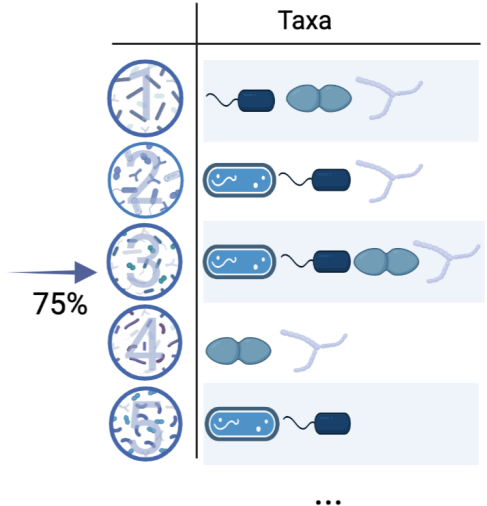
(a) Abundance Table



(b) Transaction Table



(c) Sub-sampled transaction table



## Association Rule Mining

(d)

Frequent Itemsets: minSupp = 0.5; minCorr = 0.1

	Support	minCorr
	0.6	-0.23
	0.6	-0.03
	<b>0.6</b>	<b>0.56</b>
	<b>0.52</b>	<b>0.24</b>
	0.46	0.31
	0.33	0.08

Iterate  
100 times  
for cross  
validation

(e)

Ruleset: minLift = 1.01

	Confidence	Lift
→	0.75	1.25
→	<b>1</b>	<b>1.667</b>
→	0.66	1.006
→	0.95	0.987
→	<b>0.87</b>	<b>1.128</b>
→	<b>1</b>	<b>1.18</b>
→	0.82	0.976
→	0.46	0.872

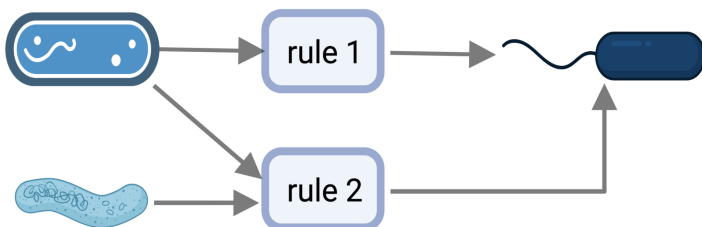
(f)

Universal Ruleset: minCount = 75

	Support	minCorr	Lift	Count
→	0.6	0.56	1.25	58
→	<b>0.6</b>	<b>0.56</b>	<b>1.25</b>	<b>91</b>
→	0.6	0.56	1.128	39
→	<b>0.53</b>	<b>0.31</b>	<b>1.18</b>	<b>83</b>

## Visualization

(g) Directed Bipartite Graph



(h) Simple Undirected Graph

