

Rules:

If x_1 is A_{i1} and x_2 is A_{i2} and ... and x_n is A_{in} then $y = a_{i1}x_1 + a_{i2}x_2 + \dots + a_{in}x_n + b_i$.

R1: IF x_1 is short AND x_2 is long AND x_3 is short AND x_4 is short THEN $y = 1.00$.

R2: IF x_1 is medium AND x_2 is small AND x_3 is medium AND x_4 is medium THEN $y = 2.10$.

R3: IF x_1 is long AND x_2 is medium AND x_3 is long AND x_4 is long THEN $y = 2.95$.

x1:			x2:			x3:		
S	c=5	w=0.9	S	c=2.8	w=1	S	c=1.5	w=0.6
M	c=5.9	w=0.8	M	c=2.9	w=0.9	M	c=4.2	w=0.5
L	c=6.6	w=0.9	L	c=3.4	w=1	L	c=5.5	w=0.5
x4:								
S	c=0.2	w=0.9						
M	c=1.4	w=1						
L	c=2	w=0.8						

$$\begin{pmatrix} a_{11} & a_{12} & a_{13} & a_{14} \\ a_{21} & a_{22} & a_{23} & a_{24} \\ a_{31} & a_{32} & a_{33} & a_{34} \end{pmatrix} = \begin{pmatrix} -0.0000 & 0.0000 & -0.0001 & 0.8500 \\ -0.1121 & -0.2234 & 0.0029 & 0.8500 \\ -0.1020 & -0.0624 & 0.1276 & 0.8500 \end{pmatrix}$$

Table:

x1	x2	x3	x4	class	y	
5.1	3.5	1.4	0.2	1	0.5	Ok
4.9	3.0	1.4	0.2	1	0.5	Ok
4.7	3.2	1.3	0.2	1	0.5	Ok
4.6	3.1	1.5	0.2	1	0.5	Ok
5.0	3.6	1.4	0.2	1	0.5	Ok
5.4	3.9	1.7	0.4	1	0.3	Ok
4.6	3.4	1.4	0.3	1	0.4	Ok
5.0	3.4	1.5	0.2	1	0.5	Ok
4.4	2.9	1.4	0.2	1	0.5	Ok
4.9	3.1	1.5	0.1	1	0.6	Ok
5.4	3.7	1.5	0.2	1	0.5	Ok
4.8	3.4	1.6	0.2	1	0.5	Ok
4.8	3.0	1.4	0.1	1	0.6	Ok
4.3	3.0	1.1	0.1	1	0.6	Ok
5.8	4.0	1.2	0.2	1	0.5	Ok
5.7	4.4	1.5	0.4	1	0.3	Ok
5.4	3.9	1.3	0.4	1	0.3	Ok
5.1	3.5	1.4	0.3	1	0.4	Ok
5.7	3.8	1.7	0.3	1	0.4	Ok
5.1	3.8	1.5	0.3	1	0.4	Ok
5.4	3.4	1.7	0.2	1	0.5	Ok
5.1	3.7	1.5	0.4	1	0.3	Ok

4.6	3.6	1.0	0.2	1	0.5	Ok
5.1	3.3	1.7	0.5	1	0.2	Ok
4.8	3.4	1.9	0.2	1	0.5	Ok
5.0	3.0	1.6	0.2	1	0.5	Ok
5.0	3.4	1.6	0.4	1	0.3	Ok
5.2	3.5	1.5	0.2	1	0.5	Ok
5.2	3.4	1.4	0.2	1	0.5	Ok
4.7	3.2	1.6	0.2	1	0.5	Ok
4.8	3.1	1.6	0.2	1	0.5	Ok
5.4	3.4	1.5	0.4	1	0.3	Ok
5.2	4.1	1.5	0.1	1	0.6	Ok
5.5	4.2	1.4	0.2	1	0.5	Ok
4.9	3.1	1.5	0.1	1	0.6	Ok
5.0	3.2	1.2	0.2	1	0.5	Ok
5.5	3.5	1.3	0.2	1	0.5	Ok
4.9	3.1	1.5	0.1	1	0.6	Ok
4.4	3.0	1.3	0.2	1	0.5	Ok
5.1	3.4	1.5	0.2	1	0.5	Ok
5.0	3.5	1.3	0.3	1	0.4	Ok
4.5	2.3	1.3	0.3	1	0.4	Ok
4.4	3.2	1.3	0.2	1	0.5	Ok
5.0	3.5	1.6	0.6	1	0.2	Ok
5.1	3.8	1.9	0.4	1	0.3	Ok
4.8	3.0	1.4	0.3	1	0.4	Ok
5.1	3.8	1.6	0.2	1	0.5	Ok
4.6	3.2	1.4	0.2	1	0.5	Ok
5.3	3.7	1.5	0.2	1	0.5	Ok
5.0	3.3	1.4	0.2	1	0.5	Ok
7.0	3.2	4.7	1.4	2	2.0	Ok
6.4	3.2	4.5	1.5	2	1.6	Ok
6.9	3.1	4.9	1.5	2	2.6	No
5.5	2.3	4.0	1.3	2	1.7	Ok
6.5	2.8	4.6	1.5	2	1.8	Ok
5.7	2.8	4.5	1.3	2	1.6	Ok
6.3	3.3	4.7	1.6	2	1.9	Ok
4.9	2.4	3.3	1.0	2	1.5	Ok
6.6	2.9	4.6	1.3	2	1.6	Ok
5.2	2.7	3.9	1.4	2	1.8	Ok
5.0	2.0	3.5	1.0	2	1.6	Ok
5.9	3.0	4.2	1.5	2	1.7	Ok
6.0	2.2	4.0	1.0	2	1.5	No
6.1	2.9	4.7	1.4	2	1.7	Ok
5.6	2.9	3.6	1.3	2	1.6	Ok
6.7	3.1	4.4	1.4	2	1.5	Ok
5.6	3.0	4.5	1.5	2	1.8	Ok
5.8	2.7	4.1	1.0	2	1.4	No
6.2	2.2	4.5	1.5	2	1.9	Ok
5.6	2.5	3.9	1.1	2	1.5	Ok
5.9	3.2	4.8	1.8	2	2.3	Ok
6.1	2.8	4.0	1.3	2	1.6	Ok
6.3	2.5	4.9	1.5	2	2.4	Ok
6.1	2.8	4.7	1.2	2	1.5	Ok

6.4	2.9	4.3	1.3	2	1.5	Ok
6.6	3.0	4.4	1.4	2	1.6	Ok
6.8	2.8	4.8	1.4	2	2.2	Ok
6.7	3.0	5.0	1.7	2	3.0	No
6.0	2.9	4.5	1.5	2	1.7	Ok
5.7	2.6	3.5	1.0	2	1.4	No
5.5	2.4	3.8	1.1	2	1.5	Ok
5.5	2.4	3.7	1.0	2	1.5	No
5.8	2.7	3.9	1.2	2	1.5	Ok
6.0	2.7	5.1	1.6	2	2.9	No
5.4	3.0	4.5	1.5	2	1.8	Ok
6.0	3.4	4.5	1.6	2	1.7	Ok
6.7	3.1	4.7	1.5	2	2.0	Ok
6.3	2.3	4.4	1.3	2	1.7	Ok
5.6	3.0	4.1	1.3	2	1.6	Ok
5.5	2.5	4.0	1.3	2	1.7	Ok
5.5	2.6	4.4	1.2	2	1.6	Ok
6.1	3.0	4.6	1.4	2	1.6	Ok
5.8	2.6	4.0	1.2	2	1.6	Ok
5.0	2.3	3.3	1.0	2	1.5	Ok
5.6	2.7	4.2	1.3	2	1.6	Ok
5.7	3.0	4.2	1.2	2	1.5	No
5.7	2.9	4.2	1.3	2	1.6	Ok
6.2	2.9	4.3	1.3	2	1.5	Ok
5.1	2.5	3.0	1.1	2	1.3	No
5.7	2.8	4.1	1.3	2	1.6	Ok
6.3	3.3	6.0	2.5	3	3.9	Ok
5.8	2.7	5.1	1.9	3	3.2	Ok
7.1	3.0	5.9	2.1	3	3.5	Ok
6.3	2.9	5.6	1.8	3	3.3	Ok
6.5	3.0	5.8	2.2	3	3.6	Ok
7.6	3.0	6.6	2.1	3	3.5	Ok
4.9	2.5	4.5	1.7	3	2.1	No
7.3	2.9	6.3	1.8	3	3.2	Ok
6.7	2.5	5.8	1.8	3	3.3	Ok
7.2	3.6	6.1	2.5	3	3.8	Ok
6.5	3.2	5.1	2.0	3	3.3	Ok
6.4	2.7	5.3	1.9	3	3.3	Ok
6.8	3.0	5.5	2.1	3	3.4	Ok
5.7	2.5	5.0	2.0	3	3.1	Ok
5.8	2.8	5.1	2.4	3	3.7	Ok
6.4	3.2	5.3	2.3	3	3.6	Ok
6.5	3.0	5.5	1.8	3	3.2	Ok
7.7	3.8	6.7	2.2	3	3.5	Ok
7.7	2.6	6.9	2.3	3	3.7	Ok
6.0	2.2	5.0	1.5	3	2.6	Ok
6.9	3.2	5.7	2.3	3	3.6	Ok
5.6	2.8	4.9	2.0	3	2.8	Ok
7.7	2.8	6.7	2.0	3	3.4	Ok
6.3	2.7	4.9	1.8	3	2.8	Ok
6.7	3.3	5.7	2.1	3	3.5	Ok
7.2	3.2	6.0	1.8	3	3.2	Ok

6.2	2.8	4.8	1.8	3	2.4	No
6.1	3.0	4.9	1.8	3	2.7	Ok
6.4	2.8	5.6	2.1	3	3.5	Ok
7.2	3.0	5.8	1.6	3	3.0	Ok
7.4	2.8	6.1	1.9	3	3.3	Ok
7.9	3.8	6.4	2.0	3	3.3	Ok
6.4	2.8	5.6	2.2	3	3.6	Ok
6.3	2.8	5.1	1.5	3	2.8	Ok
6.1	2.6	5.6	1.4	3	3.0	Ok
7.7	3.0	6.1	2.3	3	3.6	Ok
6.3	3.4	5.6	2.4	3	3.7	Ok
6.4	3.1	5.5	1.8	3	3.2	Ok
6.0	3.0	4.8	1.8	3	2.3	No
6.9	3.1	5.4	2.1	3	3.4	Ok
6.7	3.1	5.6	2.4	3	3.7	Ok
6.9	3.1	5.1	2.3	3	3.5	Ok
5.8	2.7	5.1	1.9	3	3.2	Ok
6.8	3.2	5.9	2.3	3	3.7	Ok
6.7	3.3	5.7	2.5	3	3.8	Ok
6.7	3.0	5.2	2.3	3	3.6	Ok
6.3	2.5	5.0	1.9	3	3.1	Ok
6.5	3.0	5.2	2.0	3	3.3	Ok
6.2	3.4	5.4	2.3	3	3.6	Ok
5.9	3.0	5.1	1.8	3	3.1	Ok

92%, 138 - good