

Assignment 4 – In Class

Interactive Data Visualization

SS 20

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- Data Set "Leaves"

Type of tree	Age of Leaf	Length of Leaf	Width of Leaf
Maple	3 weeks	2.2 cm	1.8 cm
Maple	2 months	4.6 cm	5.5 cm
Maple	4 months	8.8 cm	10.0 cm
Aspen	3 weeks	1.2 cm	1.2 cm
Aspen	2 months	3.6 cm	3.6 cm
Aspen	4 months	7.5 cm	7.5 cm
Pear-Tree	3 weeks	3.2 cm	1.2 cm
Pear-Tree	2 months	7.0 cm	2.5 cm
Pear-Tree	4 months	11.0 cm	4.0 cm

a) Set up the data model:

Describe the characteristics of the data set “Leaves”.

b) Draw a scatter plot of length and width of leaves.

c) Visualize data set with scatter plot matrix.

d) Visualize data set with parallel coordinates.



Assignment 4 – In Class a)

Type of Tree	Age of Leaf	Length of Leaf	Width of Leaf

Assignment 4 – In Class a)

Type of Tree	Age of Leaf	Length of Leaf	Width of Leaf
Nominal data			

Type of tree	Age of Leaf	Length of Leaf	Width of Leaf
Maple
...
Aspen
...
Pear-Tree
...



Assignment 4 – In Class a)

Type of Tree	Age of Leaf	Length of Leaf	Width of Leaf
Nominal data	Quantitative/ ordinal data		

Type of tree	Age of Leaf [weeks]	Length of Leaf	Width of Leaf
Maple	3	...	...
Maple	8	...	...
Maple	16	...	...
Aspen	3	...	...
Aspen	8	...	...
...

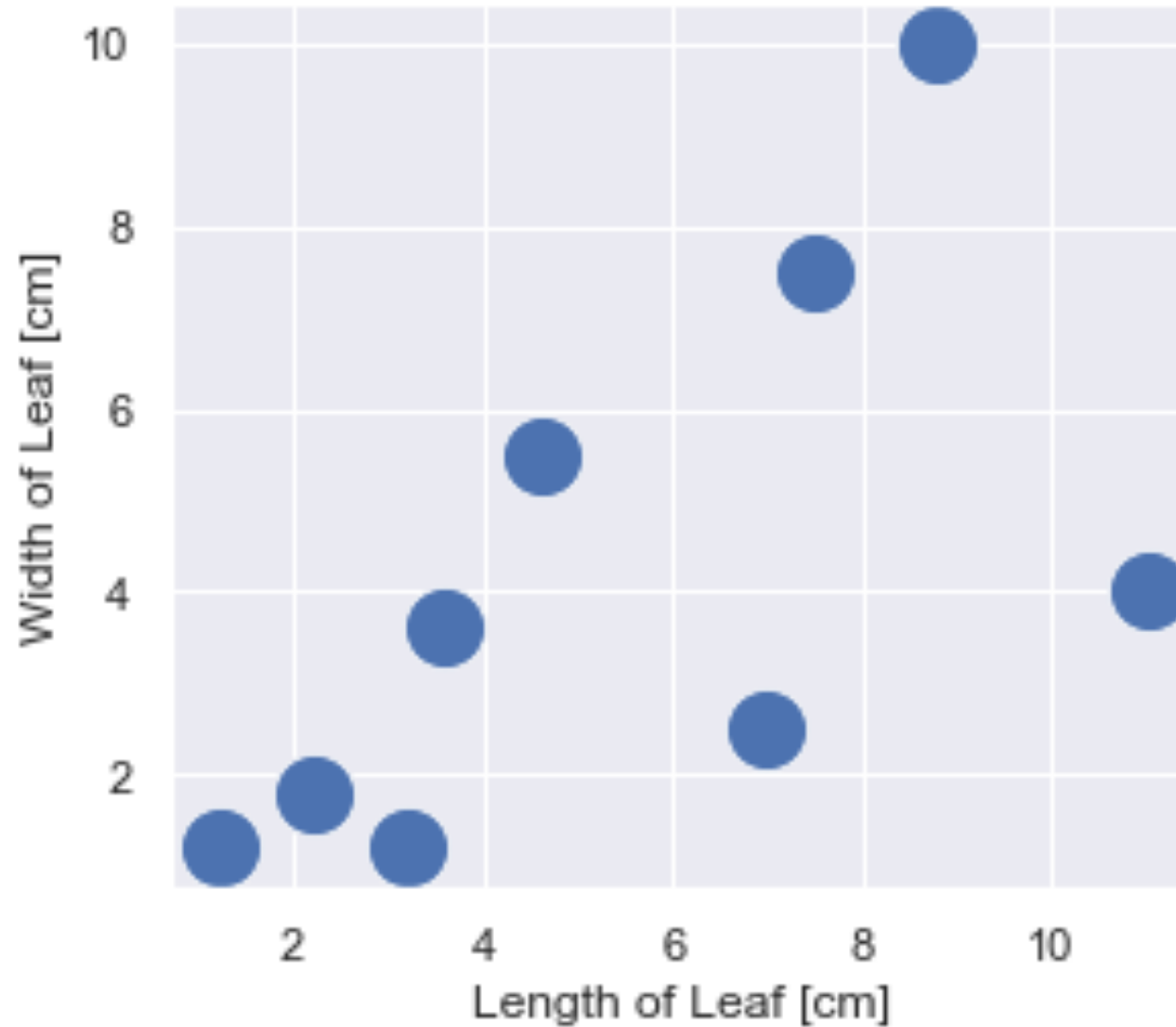


Assignment 4 – In Class a)

Type of Tree	Age of Leaf	Length of Leaf	Width of Leaf
Nominal data	Quantitative/ ordinal data	Quantitative data	Quantitative data

Type of tree	Age of Leaf	Length of Leaf	Width of Leaf
Maple	3 weeks	2.2 cm	1.8 cm
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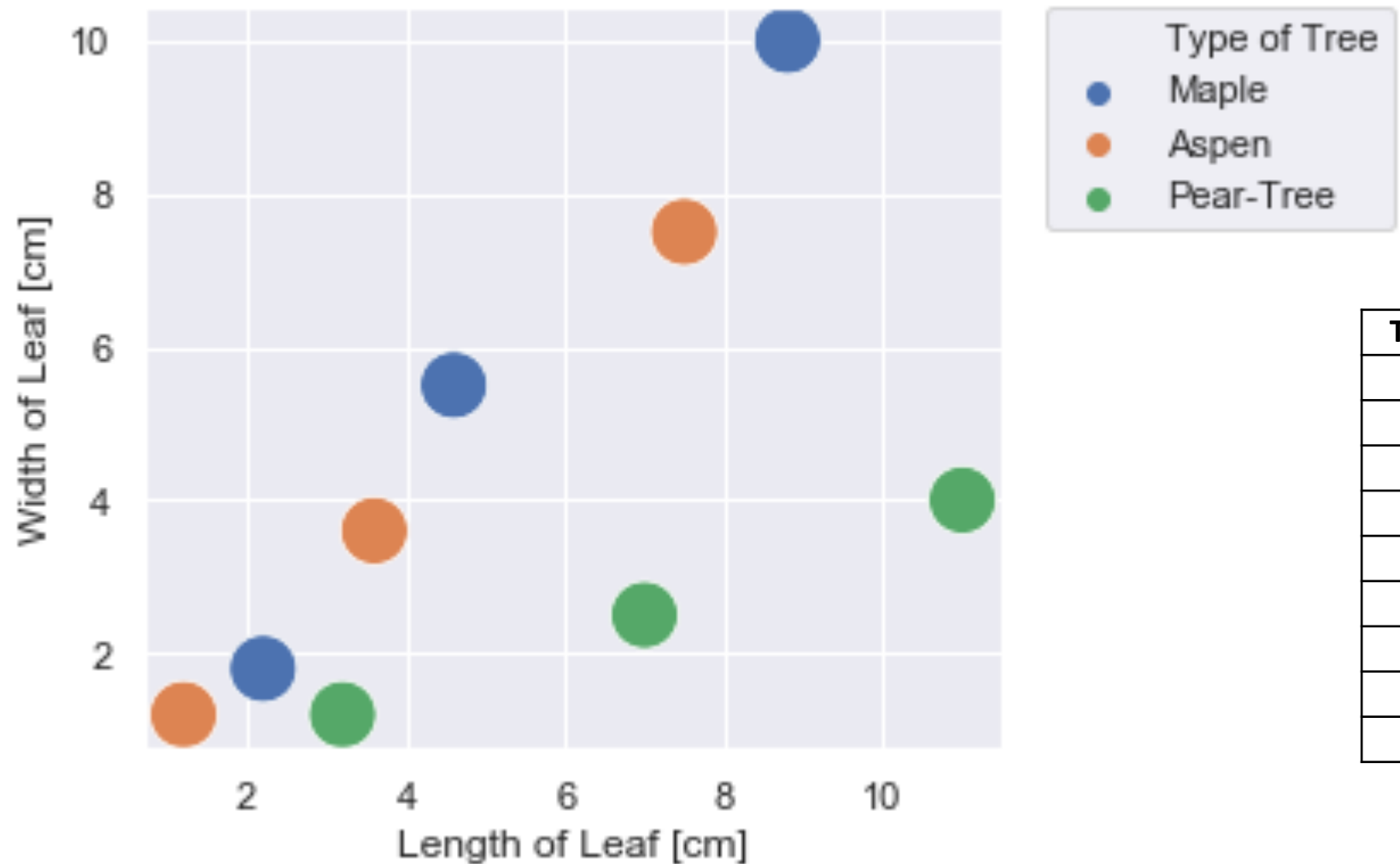
Assignment 4 – In Class b)



Length of Leaf	Width of Leaf
2.2 cm	1.8 cm
4.6 cm	5.5 cm
8.8 cm	10.0 cm
1.2 cm	1.2 cm
3.6 cm	3.6 cm
7.5 cm	7.5 cm
3.2 cm	1.2 cm
7.0 cm	2.5 cm
11.0 cm	4.0 cm



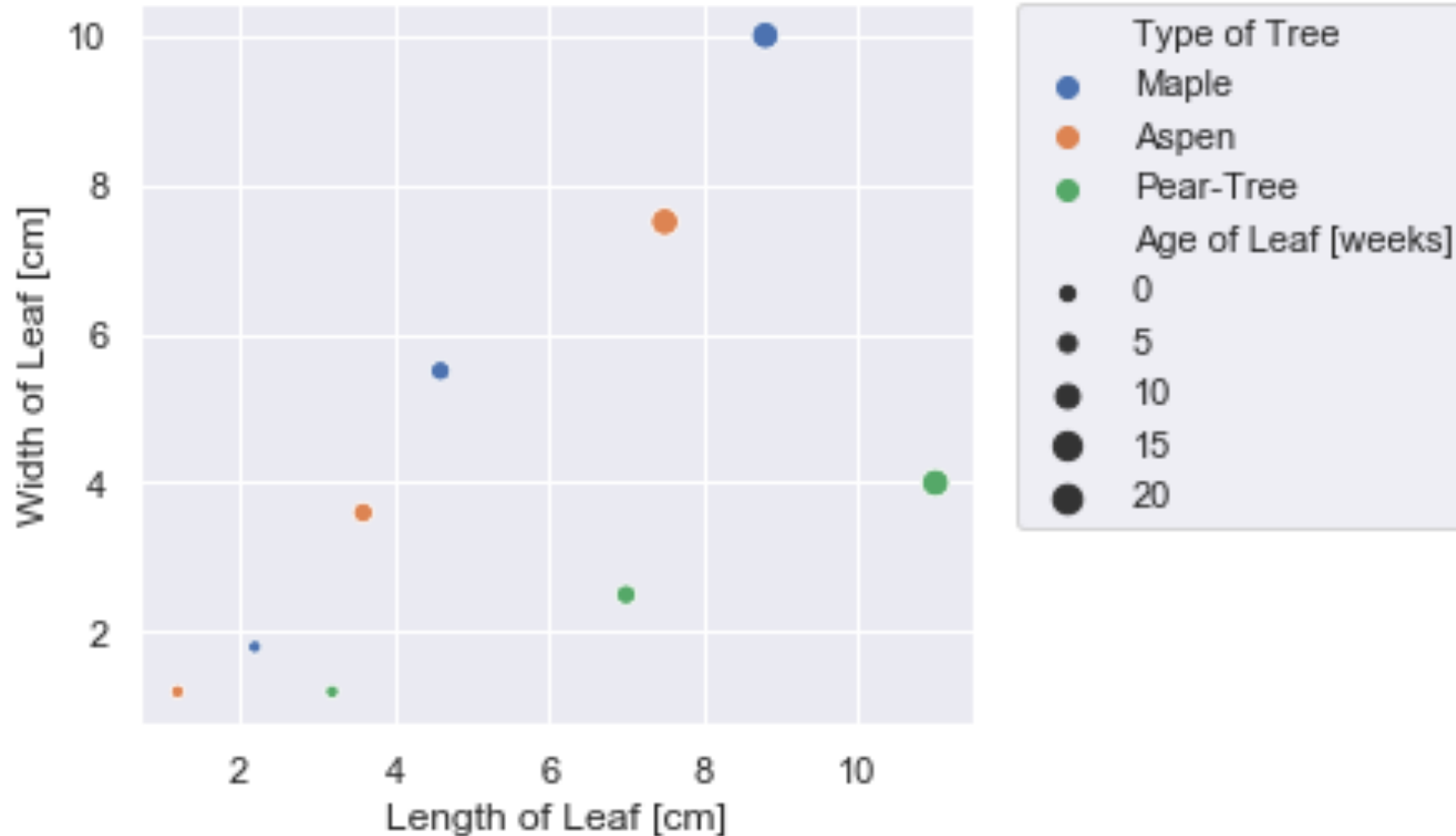
Assignment 4 – In Class b)



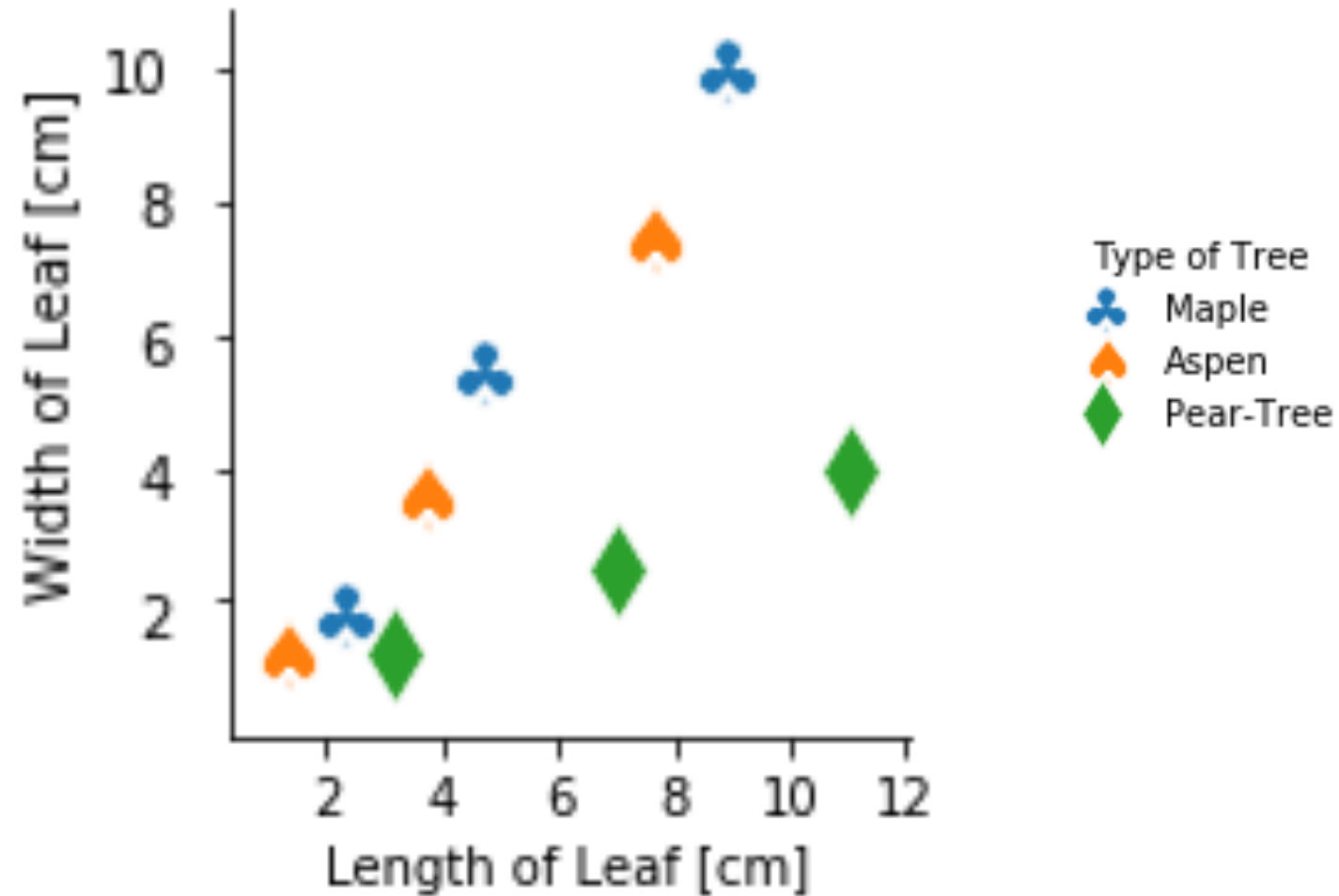
Type of tree	Length of Leaf	Width of Leaf
Maple	2.2 cm	1.8 cm
Maple	4.6 cm	5.5 cm
Maple	8.8 cm	10.0 cm
Aspen	1.2 cm	1.2 cm
Aspen	3.6 cm	3.6 cm
Aspen	7.5 cm	7.5 cm
Pear-Tree	3.2 cm	1.2 cm
Pear-Tree	7.0 cm	2.5 cm
Pear-Tree	11.0 cm	4.0 cm



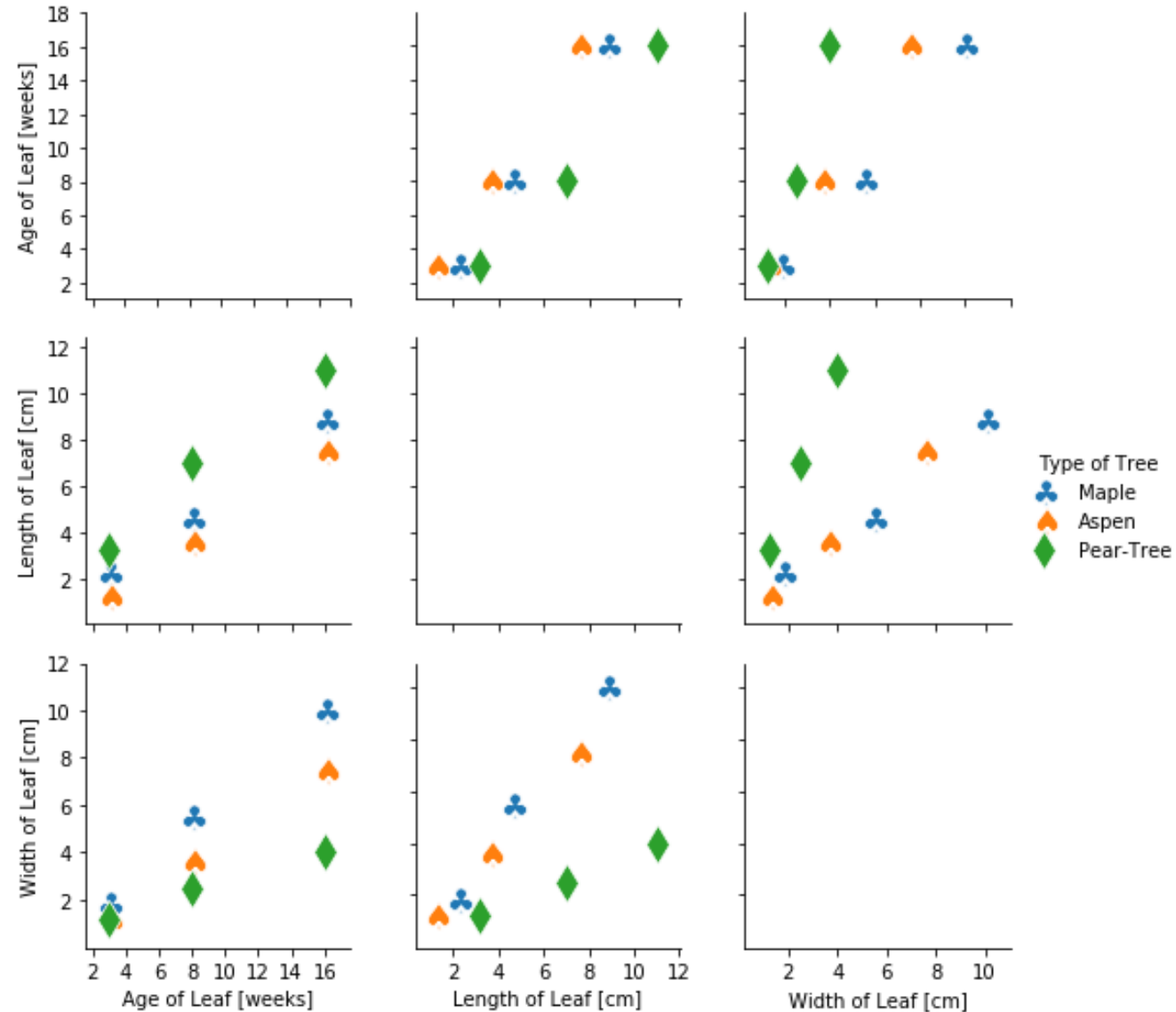
Assignment 4 – In Class b)



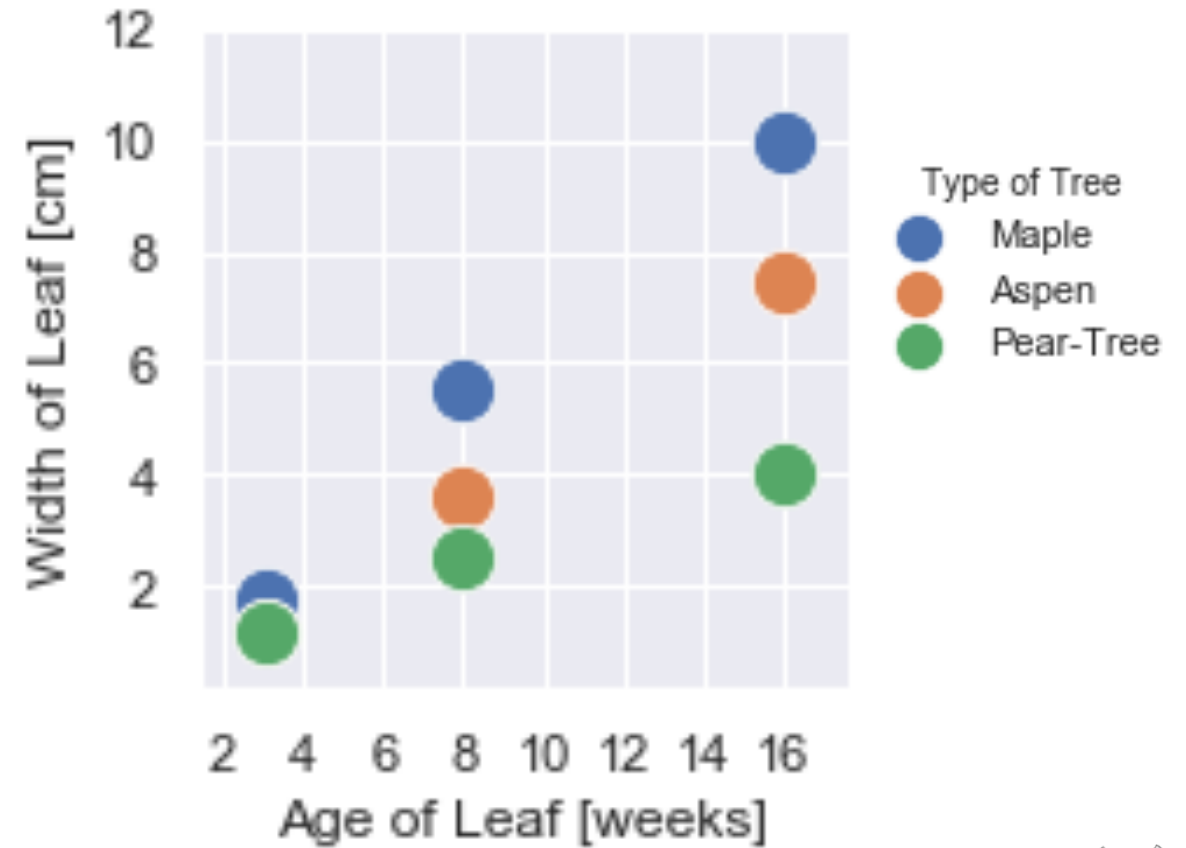
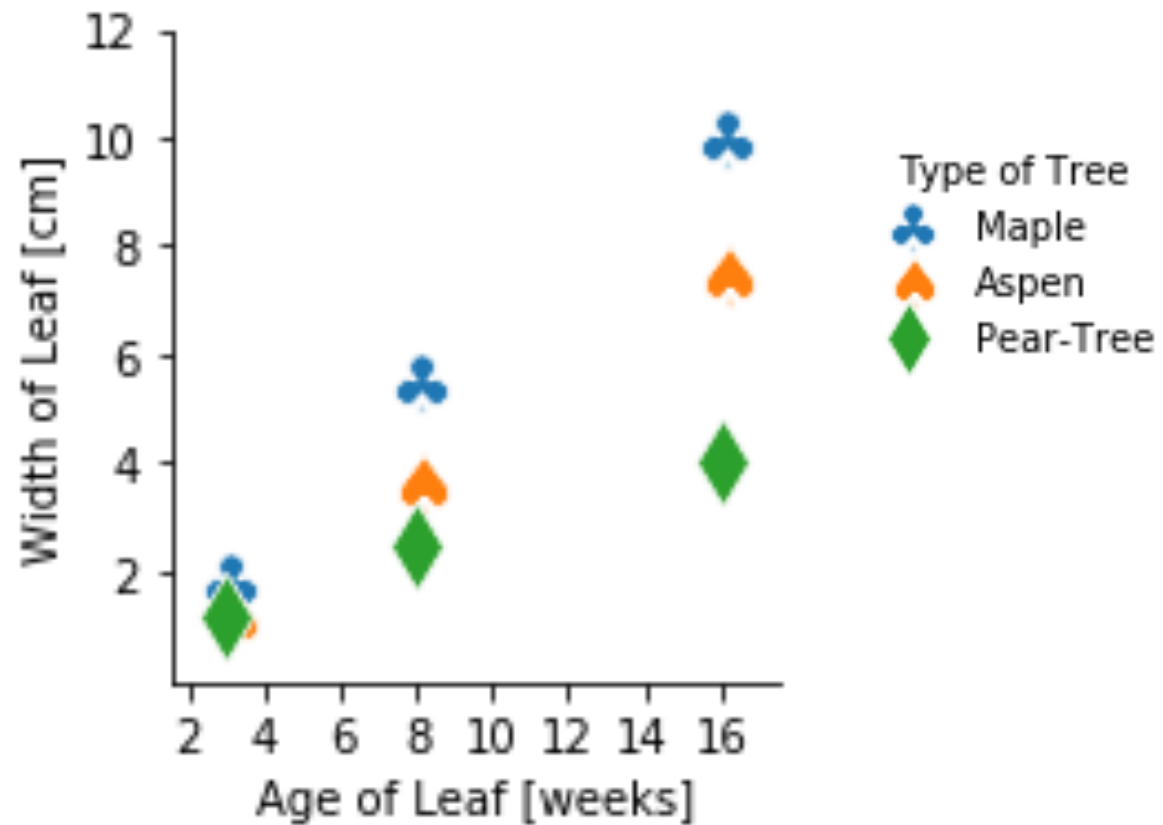
Assignment 4 – In Class b)



Assignment 4 – In Class c)



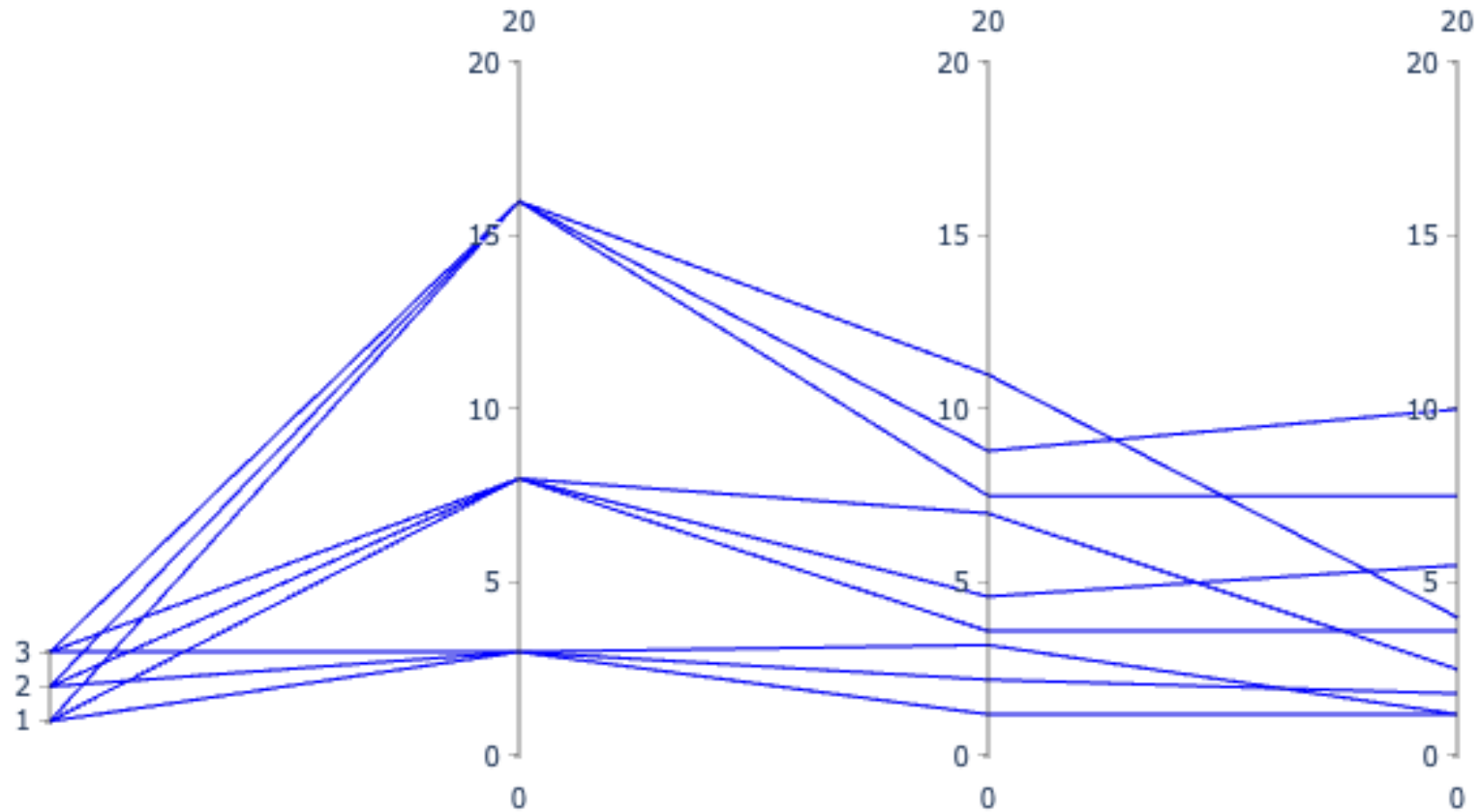
Assignment 4 – In Class c)



Assignment 4 – In Class d)

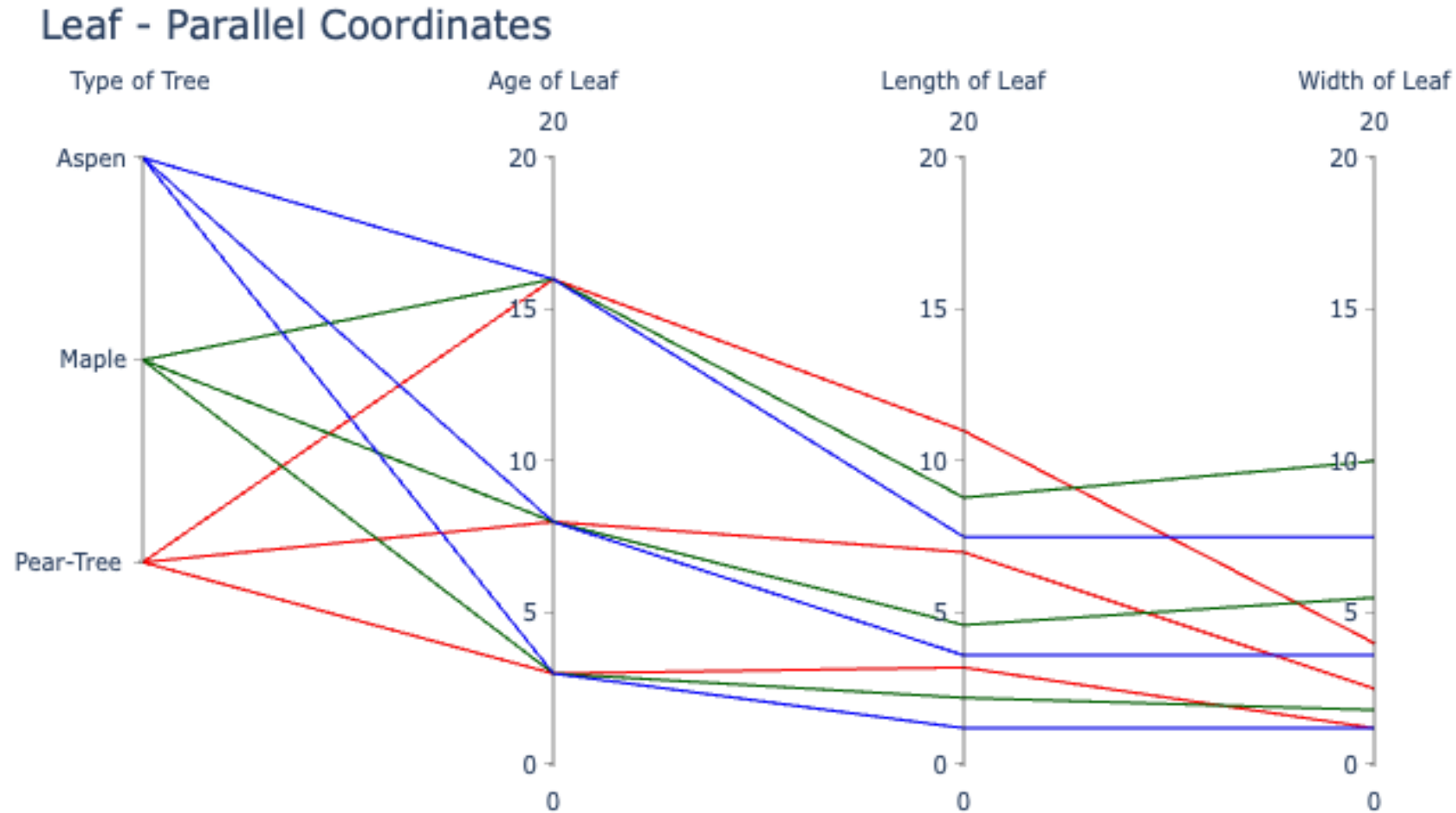
Bad solution:

Leaf - Parallel Coordinates



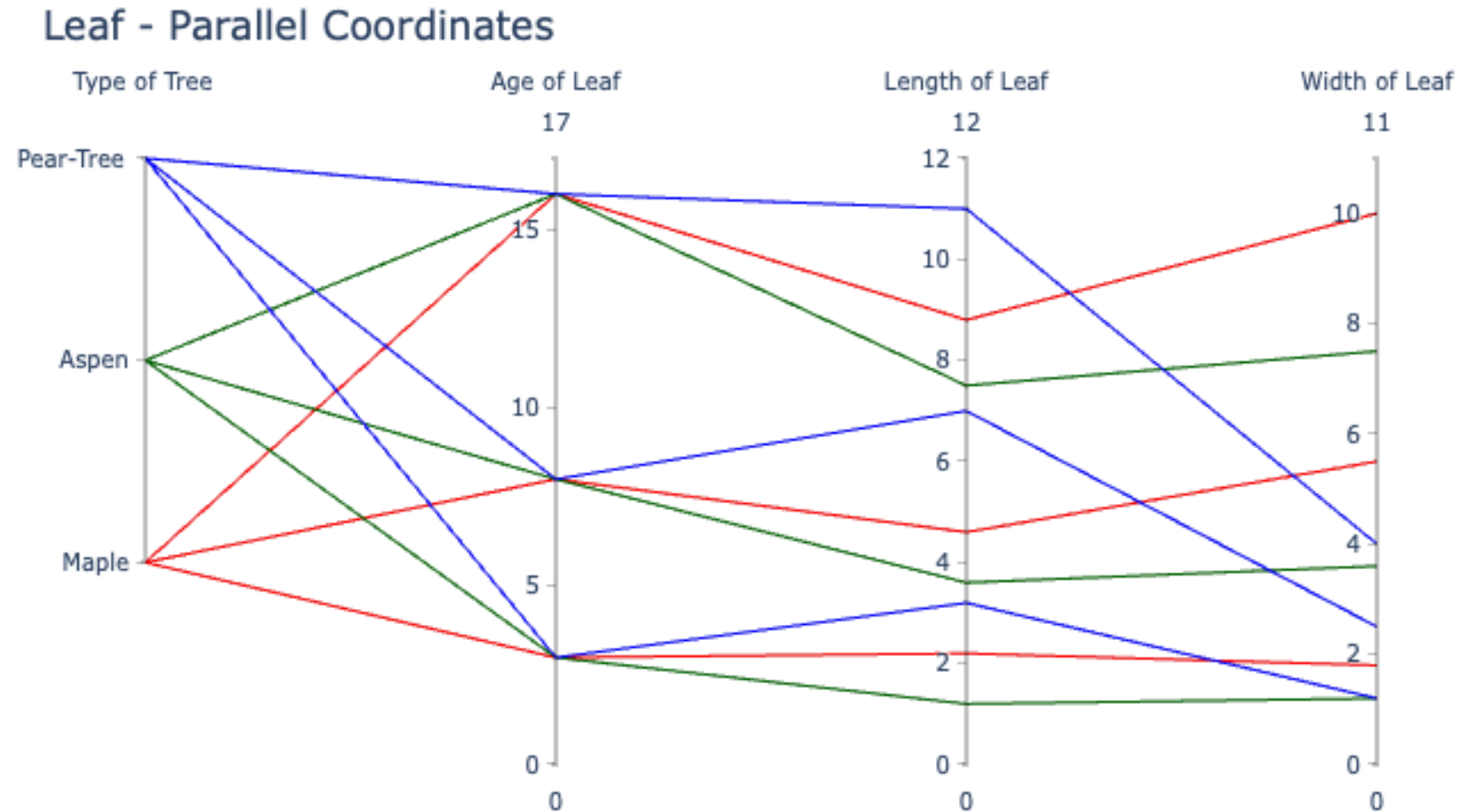
Assignment 4 – In Class d)

Almost good solution:



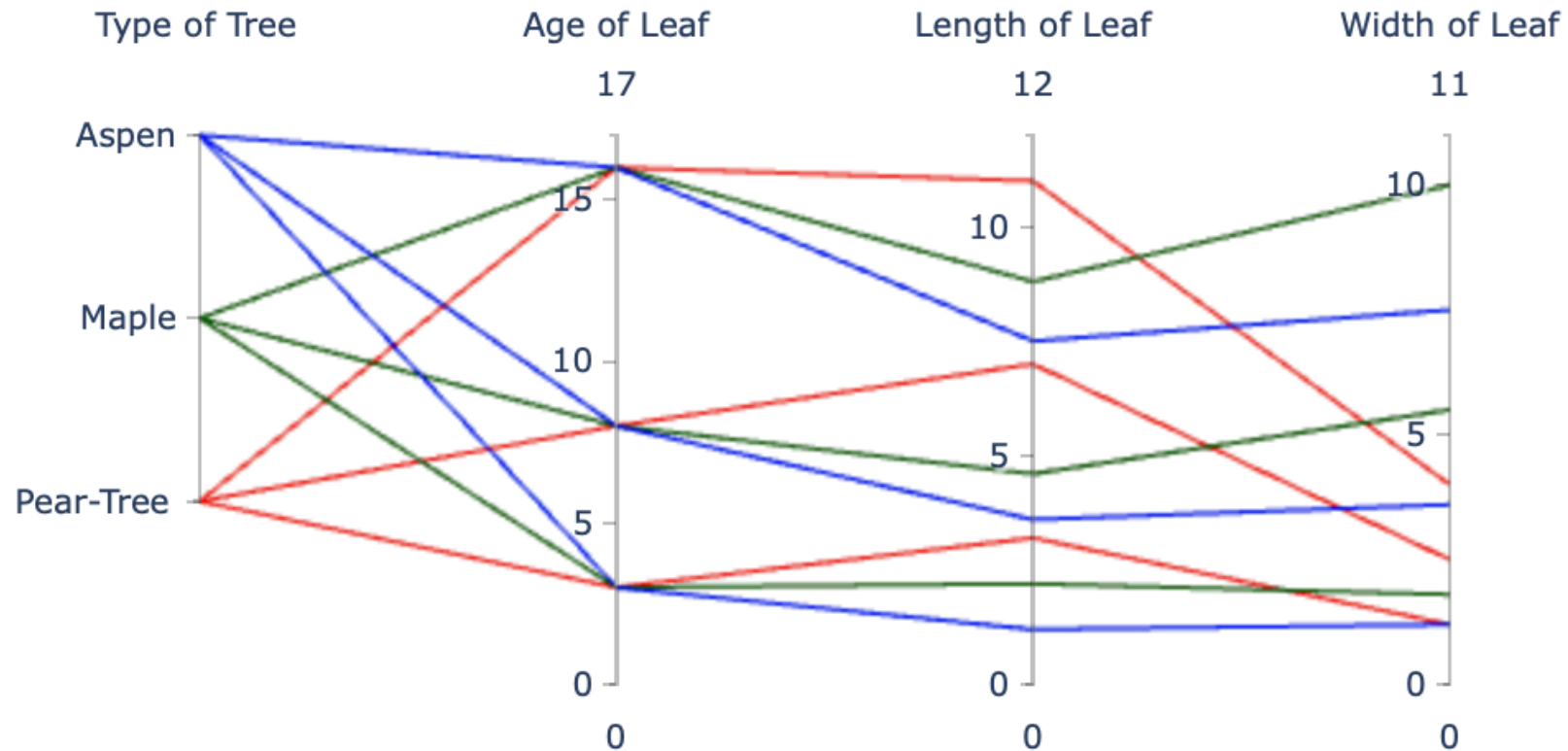
Assignment 4 – In Class d)

Good solution:



Good solution:

Leaf - Parallel Coordinates



Assignment 4 – In Class