Nama : Muhammad Raflika Dwiyansyah
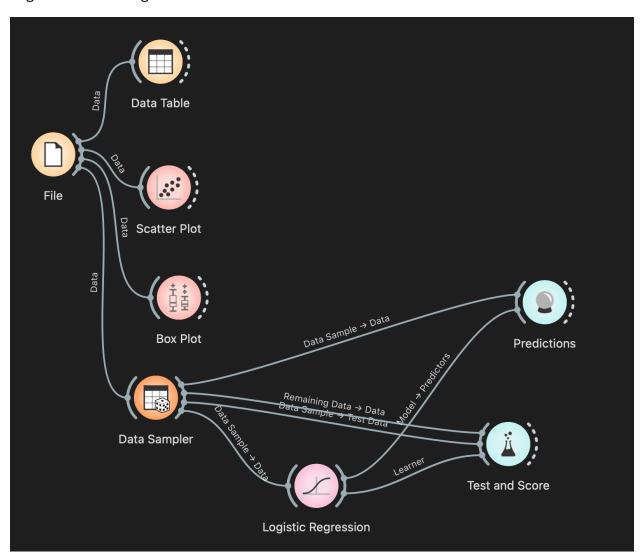
NIM: 1103210211

Kelas: TK-45-05

Tugas Week 2 Orange Data

Data Table

	Species	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
1	Iris-setosa	1	5.1	3.5	1.4	0.2
2	Iris-setosa	2	4.9	3.0	1.4	0.2
3	Iris-setosa	3	4.7	3.2	1.3	0.2
4	Iris-setosa	4	4.6	3.1	1.5	0.2
5	Iris-setosa	5	5.0	3.6	1.4	0.2
6	Iris-setosa	6	5.4	3.9	1.7	0.4
7	Iris-setosa	7	4.6	3.4	1.4	0.3
8	Iris-setosa	8	5.0	3.4	1.5	0.2
9	Iris-setosa	9	4.4	2.9	1.4	0.2
10	Iris-setosa	10	4.9	3.1	1.5	0.1
11	Iris-setosa	11	5.4	3.7	1.5	0.2
12	Iris-setosa	12	4.8	3.4	1.6	0.2
13	Iris-setosa	13	4.8	3.0	1.4	0.1
14	Iris-setosa	14	4.3	3.0	1.1	0.1
15	Iris-setosa	15	5.8	4.0	1.2	0.2
16	Iris-setosa	16	5.7	4.4	1.5	0.4
17	Iris-setosa	17	5.4	3.9	1.3	0.4
18	Iris-setosa	18	5.1	3.5	1.4	0.3
19	Iris-setosa	19	5.7	3.8	1.7	0.3
20	Iris-setosa	20	5.1	3.8	1.5	0.3
21	Iris-setosa	21	5.4	3.4	1.7	0.2
22	Iris-setosa	22	5.1	3.7	1.5	0.4
23	Iris-setosa	23	4.6	3.6	1.0	0.2
24	Iris-setosa	24	5.1	3.3	1.7	0.5
25	Iris-setosa	25	4.8	3.4	1.9	0.2
26	Iris-setosa	26	5.0	3.0	1.6	0.2
27	Iris-setosa	27	5.0	3.4	1.6	0.4
28	Iris-setosa	28	5.2	3.5	1.5	0.2
29	Iris-setosa	29	5.2	3.4	1.4	0.2
30	Iris-setosa	30	4.7	3.2	1.6	0.2
31	Iris-setosa	31	4.8	3.1	1.6	0.2
32	Iris-setosa	32	5.4	3.4	1.5	0.4
33	Iris-setosa	33	5.2	4.1	1.5	0.1
34	Iris-setosa	34	5.5	4.2	1.4	0.2
35	Iris-setosa	35	4.9	3.1	1.5	0.1
36	Iris-setosa	36	5.0	3.2	1.2	0.2
37	Iris-setosa	37	5.5	3.5	1.3	0.2
38	Iris-setosa	38	4.9	3.1	1.5	0.1
39	Iris-setosa	39	4.4	3.0	1.3	0.2
40	Iris-setosa	40	5.1	3.4	1.5	0.2
41	Iris-setosa	41	5.0	3.5	1.3	0.3
42	Iris-setosa	42	4.5	2.3	1.3	0.3

150   150 | 150

Scatter Plot

Axes

Axis x: `N Id`

Axis y: `N SepalLengthCm`

Find Informative Projections

Attributes

Color: `C Species`

Shape: (Same shape)

Size: (Same size)

Label: (No labels)

☐ Label only selection and subset

Symbol size:

Opacity:

Jittering:

☐ Jitter numeric values

☑ Show color regions
☑ Show legend
☑ Show gridlines

Zoom/Select

☑ Send Automatically

150 | - | -   - | 150 | 2

r = 0.72
r = -0.01
r = -0.27
r = -0.03

- Iris-setosa
- Iris-versicolor
- Iris-virginica

SepalLengthCm (y axis): 7.5, 7, 6.5, 6, 5.5, 5, 4.5
Id (x axis): 0, 20, 40, 60, 80, 100, 120, 140

Box Plot

Variable

Filter...

- `C` Species
- `N` Id
- `N` SepalLengthCm
- `N` SepalWidthCm

☐ Order by relevance to subgroups

Subgroups

Filter...

None
`C` Species

☐ Order by relevance to variable

Display

☑ Annotate

◯ No comparison
◯ Compare medians
◉ Compare means

150   - | 150

Iris-setosa: 25.50 ± 14.4
13.50 25.50 37.50

Iris-versicolor: 75.50 ± 14.4
63.50 75.50 87.50

Iris-virginica: 125.50 ± 14.4
113.50 125.50 137.50

20 40 60 80 100 120 140 160

ANOVA: 588.235 (p=0.000, N=150)

Data Sampler

Sampling Type
- ● Fixed proportion of data:
  - 70 %
- ○ Fixed sample size
  - Instances: 1
  - ☐ Sample with replacement
- ○ Cross validation
  - Number of subsets: 10
  - Unused subset: 1
- ○ Bootstrap

Options
- ☑ Replicable (deterministic) sampling
- ☐ Stratify sample (when possible)

Sample Data

? 🗎 ⇥ 150 ⇥ 105 | 45

Logistic Regression

Name

Logistic Regression

Regularization type: Ridge (L2)

Strength:

Weak ——●—— Strong

C=1

☐ Balance class distribution

☑ Apply Automatically

? 🗎 ⇥ 105 | - ⇥ 6 | 🗎 🗎

Test and Score

- ● Cross validation
  - Number of folds: 5
  - ☑ Stratified
- ○ Cross validation by feature
- ○ Random sampling
  - Repeat train/test: 10
  - Training set size: 66 %
  - ☑ Stratified
- ○ Leave one out
- ○ Test on train data
- ○ Test on test data

Evaluation results for target (None, show average over classes)

Model	AUC	CA	F1	Prec	Recall	M
Logistic Regression	0.999	0.978	0.978	0.979	0.978	0.966

Compare models by: Area under ROC   ☐ Negligible diff.: 0.1

	Logistic Regression
Logistic Regression	

Table shows probabilities that the score for the model in the row is higher than that of the model in the column. Small numbers show the probability that the difference is negligible.

? 🗎 ⇥ 45 | 105 | 🗎 | - ⇥ 45 | 1×45

Predictions

Show probabilities for Classes in data   ☑ Show classification errors   Restore Original Order

	Logistic Regression	error	Species	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCr
1	0.00 : 1.00 : 0.00 → Iris-versicolor	0.000	Iris-versicolor	74	6.1	2.8	4.7	1.2
2	1.00 : 0.00 : 0.00 → Iris-setosa	0.000	Iris-setosa	19	5.7	3.8	1.7	0.3
3	0.00 : 0.00 : 1.00 → Iris-virginica	0.000	Iris-virginica	119	7.7	2.6	6.9	2.3
4	0.00 : 1.00 : 0.00 → Iris-versicolor	0.000	Iris-versicolor	79	6.0	2.9	4.5	1.5
5	0.00 : 1.00 : 0.00 → Iris-versicolor	0.000	Iris-versicolor	77	6.8	2.8	4.8	1.4
6	1.00 : 0.00 : 0.00 → Iris-setosa	0.000	Iris-setosa	32	5.4	3.4	1.5	0.4
7	0.00 : 1.00 : 0.00 → Iris-versicolor	0.000	Iris-versicolor	65	5.6	2.9	3.6	1.3
8	0.00 : 0.00 : 1.00 → Iris-virginica	0.000	Iris-virginica	142	6.9	3.1	5.1	2.3
9	0.00 : 1.00 : 0.00 → Iris-versicolor	0.000	Iris-versicolor	69	6.2	2.2	4.5	1.5
10	0.00 : 1.00 : 0.00 → Iris-versicolor	0.000	Iris-versicolor	83	5.8	2.7	3.9	1.2
11	0.00 : 0.00 : 1.00 → Iris-virginica	0.000	Iris-virginica	111	6.5	3.2	5.1	2.0
12	1.00 : 0.00 : 0.00 → Iris-setosa	0.000	Iris-setosa	13	4.8	3.0	1.4	0.1
13	1.00 : 0.00 : 0.00 → Iris-setosa	0.000	Iris-setosa	37	5.5	3.5	1.3	0.2
14	1.00 : 0.00 : 0.00 → Iris-setosa	0.000	Iris-setosa	10	4.9	3.1	1.5	0.1
15	1.00 : 0.00 : 0.00 → Iris-setosa	0.000	Iris-setosa	20	5.1	3.8	1.5	0.3
16	0.00 : 1.00 : 0.00 → Iris-versicolor	0.005	Iris-versicolor	57	6.3	3.3	4.7	1.6
17	0.00 : 0.01 : 0.99 → Iris-virginica	0.011	Iris-virginica	105	6.5	3.0	5.8	2.2
18	0.00 : 1.00 : 0.00 → Iris-versicolor	0.000	Iris-versicolor	70	5.6	2.5	3.9	1.1
19	0.01 : 0.99 : 0.00 → Iris-versicolor	0.012	Iris-versicolor	56	5.7	2.8	4.5	1.3
20	0.00 : 0.00 : 1.00 → Iris-virginica	0.000	Iris-virginica	133	6.4	2.8	5.6	2.2
21	1.00 : 0.00 : 0.00 → Iris-setosa	0.000	Iris-setosa	30	4.7	3.2	1.6	0.2

☑ Show performance scores   Target class: (Average over classes)

Model	AUC	CA	F1	Prec	Recall	MCC
Logistic Regression	1.000	1.000	1.000	1.000	1.000	1.000

? 🗎 ⇥ 105 | 🗎 ⇥ 105 | 105 | 1×105