IDENTIFY ALIENS

REFERENCE CODE:

https://github.com/IRS-MR/S-MR-Workshop/tree/master/S-MR-Workshop3/knowledge-discovery-identify-aliens

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3.3 KNOWLEDGE DISCOVERY IDENTIFY ALIENS

Aliens

Not aliens

Training Data

SN	Triangle	Antenna	Teeth	Eyes	Alien
1	1	3	1	2	TRUE
2	1	3	0	2	TRUE
3	1	3	1	2	TRUE
4	1	3	0	3	TRUE
5	1	2	1	2	FALSE
6	0	3	0	3	FALSE
7	1	6	0	2	FALSE
8	0	3	0	2	FALSE

Which one is alien?

A B C D E

Test Data

SN	Triangle	Antenna	Teeth	Eyes	Alien
A	1	2	0	2	FALSE
B	3	2	1	2	FALSE
C	1	4	0	2	FALSE
D	1	3	0	2	TRUE
E	0	3	0	2	FALSE

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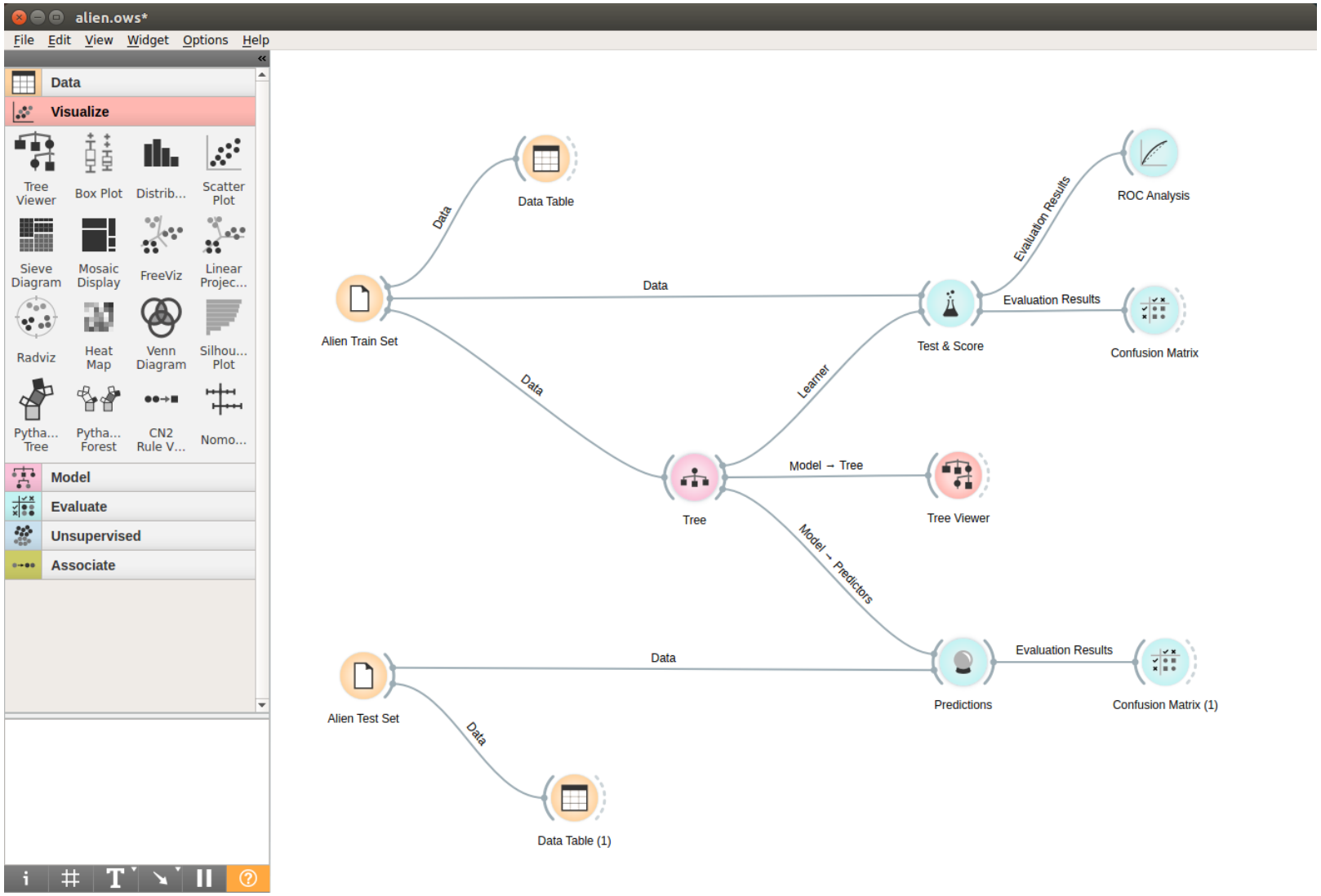
3.3 KNOWLEDGE DISCOVERY IDENTIFY ALIENS



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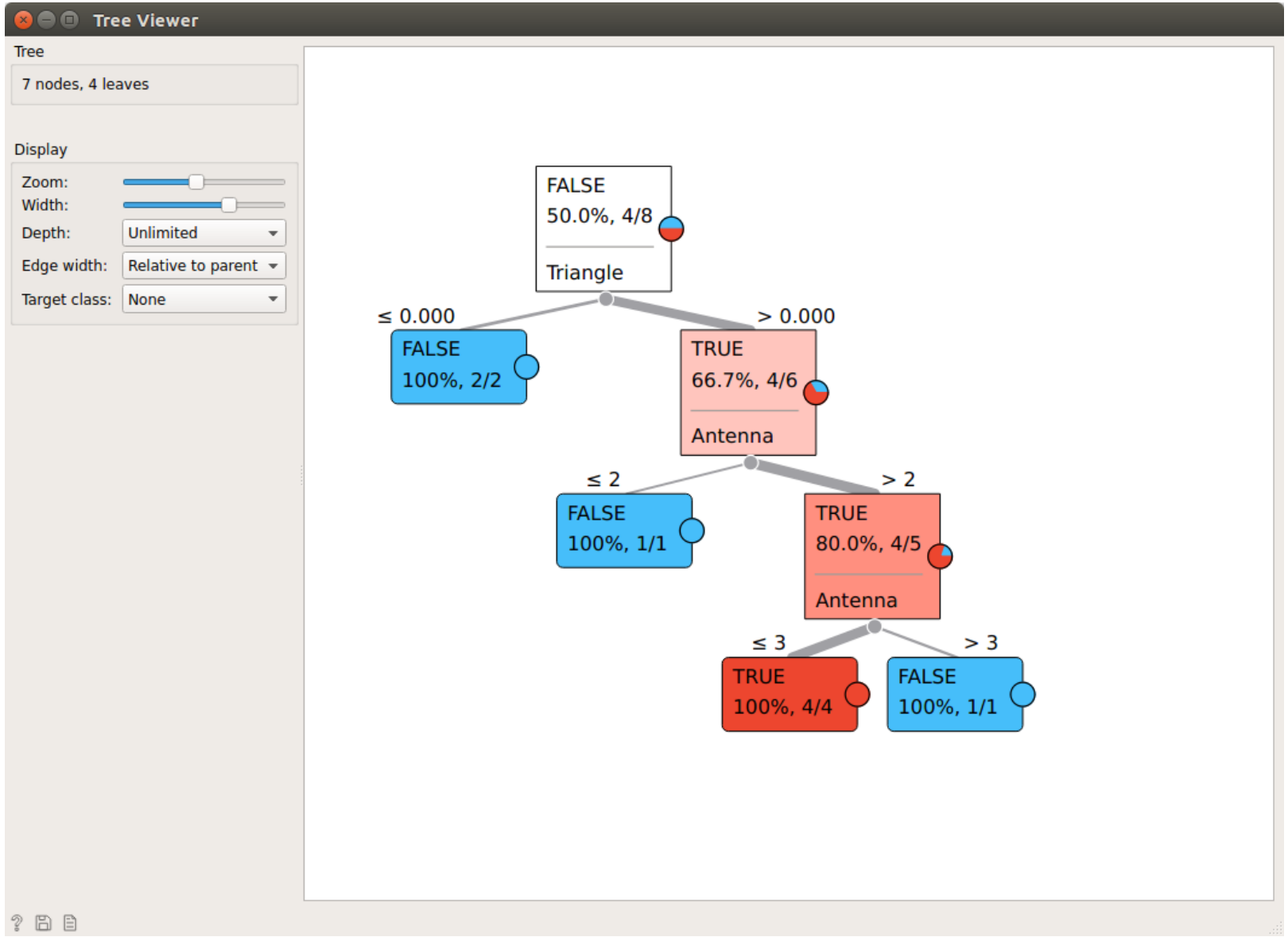
3.3 KNOWLEDGE DISCOVERY IDENTIFY ALIENS



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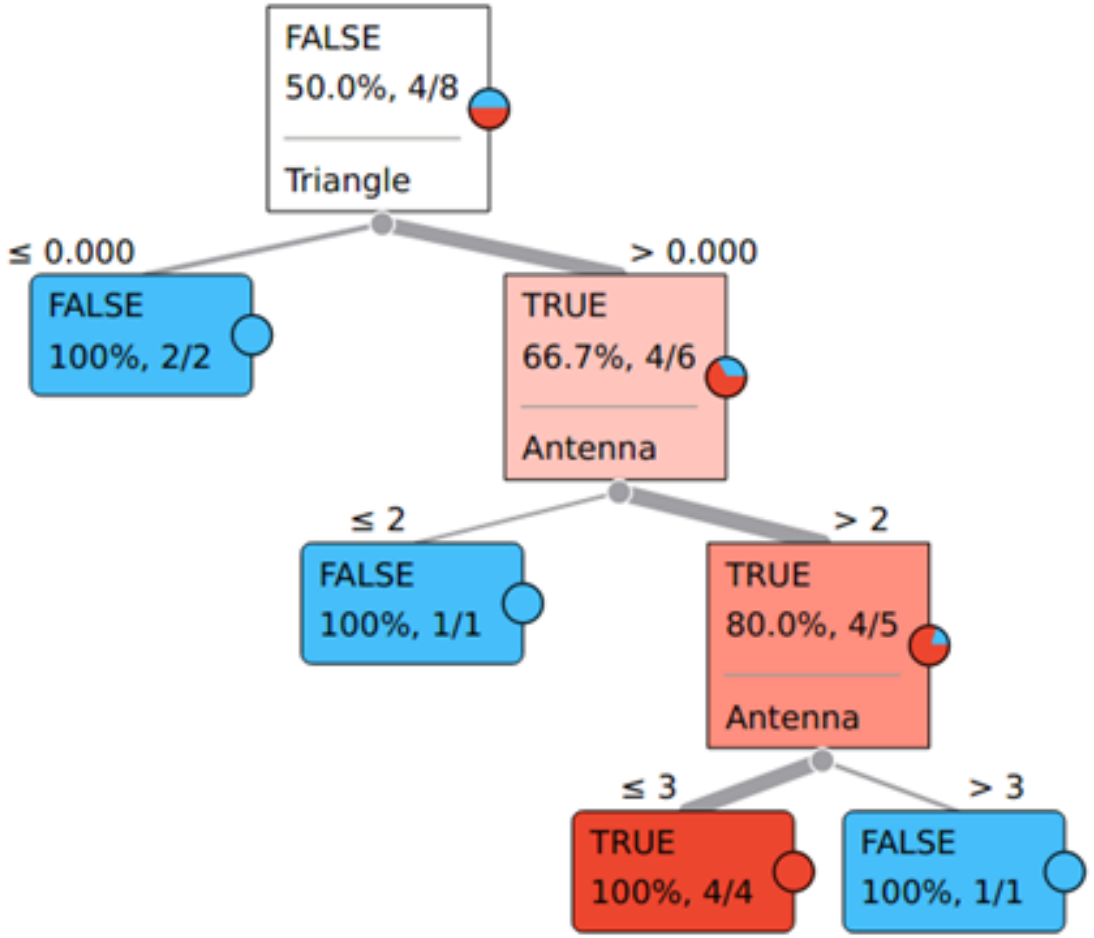
3.3 KNOWLEDGE DISCOVERY IDENTIFY ALIENS

Aliens

Not aliens

Which one is alien?

A B C D E



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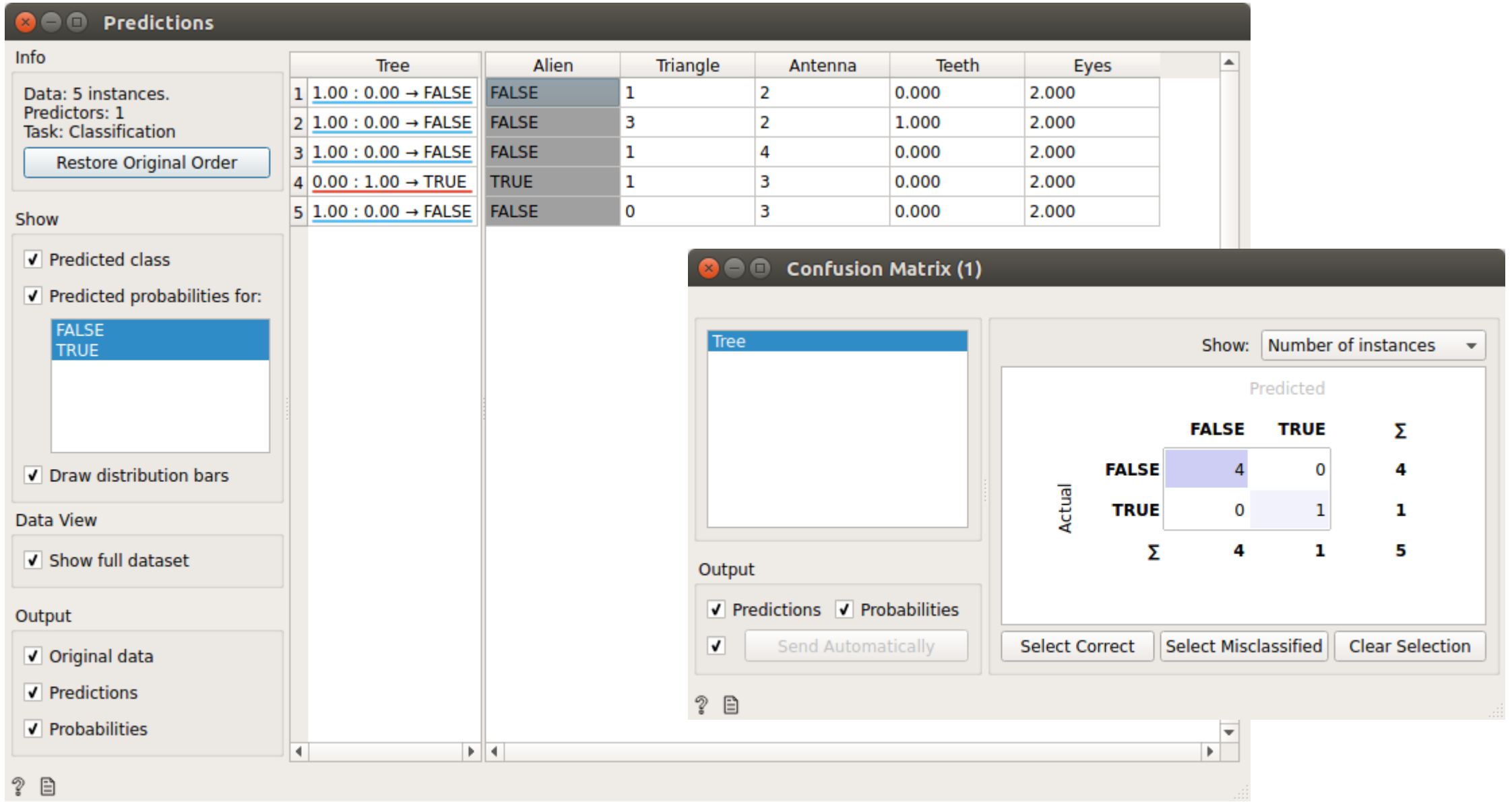
3.3 KNOWLEDGE DISCOVERY IDENTIFY ALIENS



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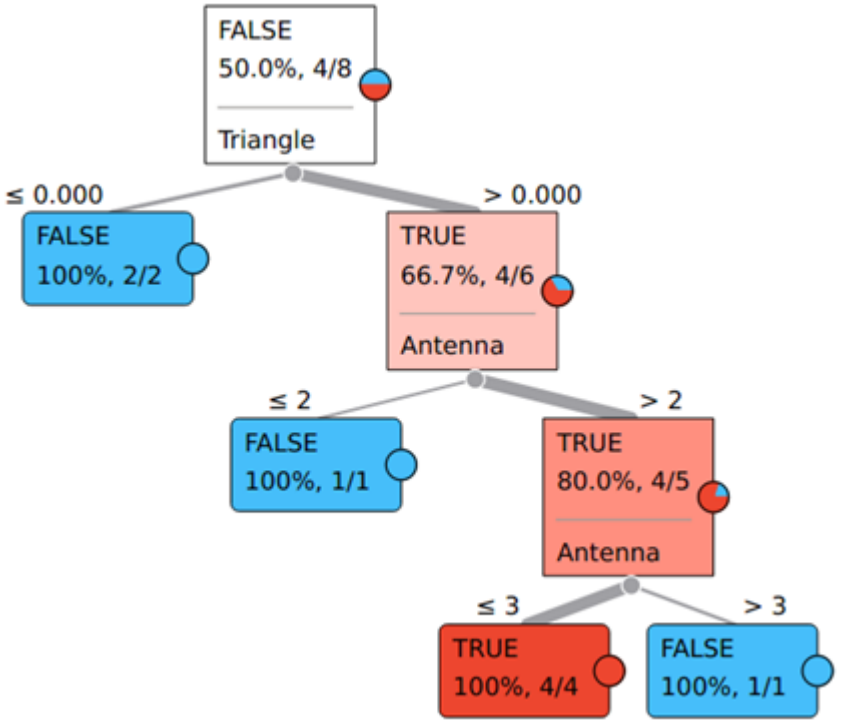
3.3 KNOWLEDGE DISCOVERY IDENTIFY ALIENS



Test Data

SN	Triangle	Antenna	Teeth	Eyes	Alien
A	1	2	0	2	FALSE
B	3	2	1	2	FALSE
C	1	4	0	2	FALSE
D	1	3	0	2	TRUE
E	0	3	0	2	FALSE
F	2	3	0	2	FALSE

Actual \ Predicted	FALSE	TRUE	Σ
FALSE	4	1	5
TRUE	0	1	1
Σ	4	2	6

	Tree	Alien	Triangle	Antenna	Teeth	Eyes
1	1.00 : 0.00 → FALSE	FALSE	1	2	0.000	2.000
2	1.00 : 0.00 → FALSE	FALSE	3	2	1.000	2.000
3	1.00 : 0.00 → FALSE	FALSE	1	4	0.000	2.000
4	0.00 : 1.00 → TRUE	TRUE	1	3	0.000	2.000
5	1.00 : 0.00 → FALSE	FALSE	0	3	0.000	2.000
6	0.00 : 1.00 → TRUE	FALSE	2	3	0.000	2.000

Which one is alien?

A **B** **C** **D** **E**

F

The 'black swan': unseen before in historical data (no scenario/representation in training data)

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END OF LECTURE NOTES

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