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DATA SCIENCE DARMAJAYA  
“YOUR BEST FUTURE IN DATA”

MEETING: [12]

# NAÏVE BAYES ALGORITHM IN PRATICAL

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# Naïve Bayes Algorithm In Practical

1. Training Dataset (Deals)
2. Testing Dataset (Deals-Testset)
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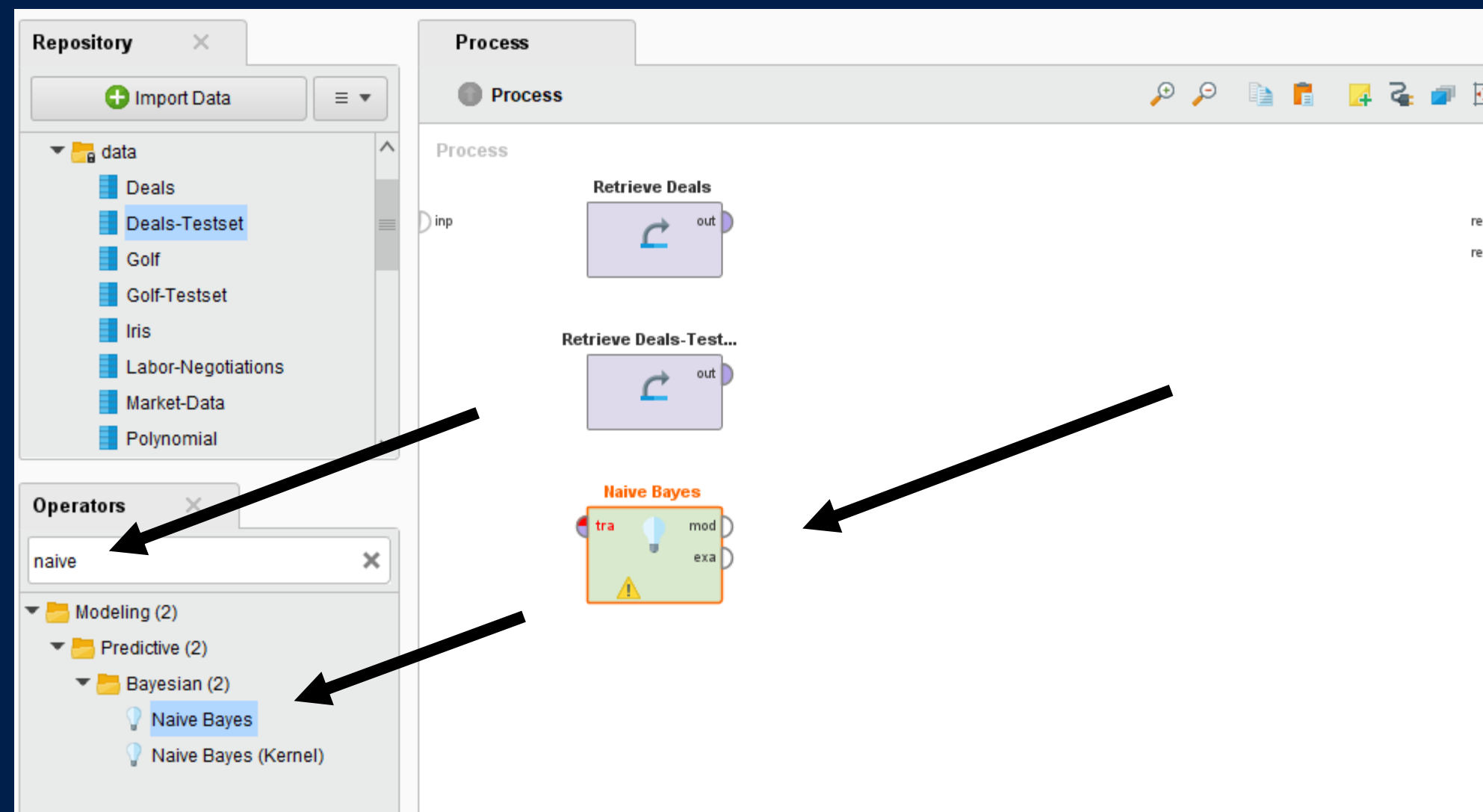
# Training Dataset

The screenshot displays a software interface for data processing. On the left, a 'data' folder is expanded, listing datasets: Deals, Deals-Testset, Golf, Golf-Testset, Iris, Labor-Negotiations, Market-Data, and Polynomial. Below this is an 'Operators' panel with a search bar and a list of operator categories: Data Access (58), Blending (82), Cleansing (28), Modeling (167), Scoring (14), Validation (30), and Utility (85). The main 'Process' area shows a flow starting with an 'inp' port, followed by a 'Retrieve Deals' operator (highlighted with a red box and a black arrow), and ending with an 'out' port. A 'res' port is also visible on the right. At the bottom, a footer reads: 'Leverage the Wisdom of Crowds to get operator recommendations based on your process design!'.

# Testing Dataset

The screenshot displays a data science software interface. On the left, a file explorer shows a 'data' folder containing several datasets: Deals, Deals-Testset, Golf, Golf-Testset, Iris, Labor-Negotiations, Market-Data, and Polynomial. Below this is an 'Operators' panel with a search bar and a list of categories: Data Access (58), Blending (82), Cleansing (28), Modeling (167), Scoring (14), and Validation (30). The main workspace, titled 'Process', shows a workflow with two 'Retrieve Deals' process blocks. The top block is labeled 'Retrieve Deals' and the bottom block is labeled 'Retrieve Deals-Testset'. A black arrow points from the right towards the 'Retrieve Deals-Testset' block. The interface also shows 'inp' and 'res' labels on the left and right sides of the process area.

# Naïve Bayes Operator



# Apply Model Operator

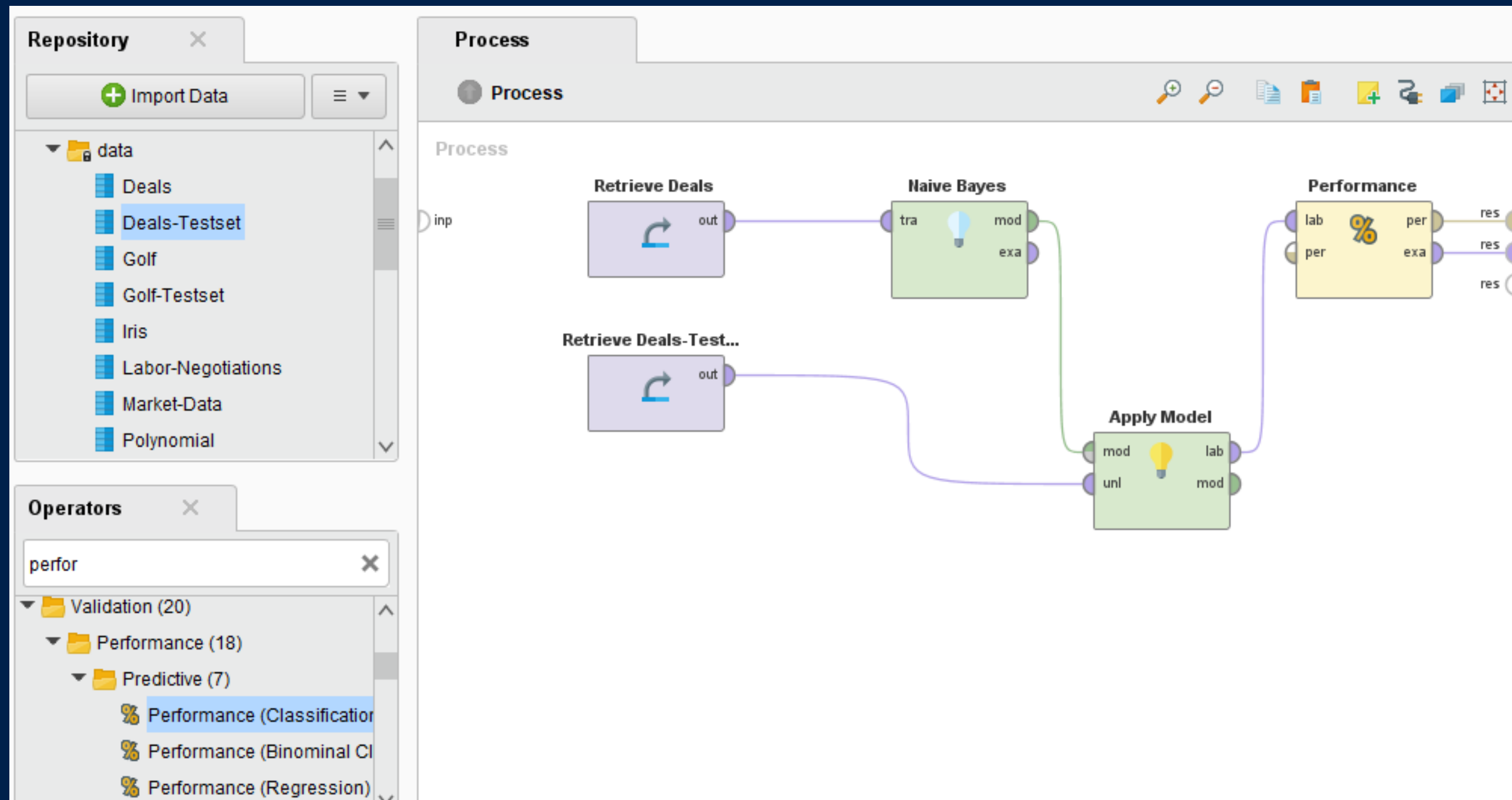
The screenshot displays a software interface with three main panels: Repository, Process, and Operators. In the **Repository** panel, a folder named 'data' is expanded, showing several datasets including 'Deals-Testset'. In the **Process** panel, a workflow is shown with three operators: 'Retrieve Deals', 'Retrieve Deals-Test...', and 'Naive Bayes'. The 'Apply Model' operator is highlighted with a yellow warning icon and a lightbulb icon, and a black arrow points to it from the right. In the **Operators** panel, a search bar contains 'Apply Mo', and the 'Apply Model' operator is selected under the 'Scoring (1)' category, with a black arrow pointing to it from the bottom right.

# Performance Operator

The screenshot displays a software interface with three main panels: Repository, Process, and Operators.

- Repository:** A tree view showing data sources under a 'data' folder, including Deals, Deals-Testset, Golf, Golf-Testset, Iris, Labor-Negotiations, Market-Data, and Polynomial. Below this is an 'Operators' panel with a search bar containing 'perfor'. A dropdown menu is open, showing a hierarchy: Validation (20) > Performance (18) > Predictive (7). The 'Performance (Classification)' operator is selected and highlighted.
- Process:** A workflow canvas with an 'inp' port on the left. It contains four operators:
  - Retrieve Deals:** A purple box with a circular arrow icon and an 'out' port.
  - Retrieve Deals-Test...:** A purple box with a circular arrow icon and an 'out' port.
  - Apply Model:** A green box with a lightbulb icon, a yellow warning triangle, and ports labeled 'mod', 'lab', and 'mod'.
  - Performance:** An orange box with a percentage sign icon, a yellow warning triangle, and ports labeled 'lab', 'per', 'per', and 'exa'. A large black arrow points to this operator.
- Naive Bayes:** A green box with a lightbulb icon, a yellow warning triangle, and ports labeled 'tra', 'mod', and 'exa'.

# Naïve Bayes Model in Practical



# Naïve Bayes Result (Apply Model)

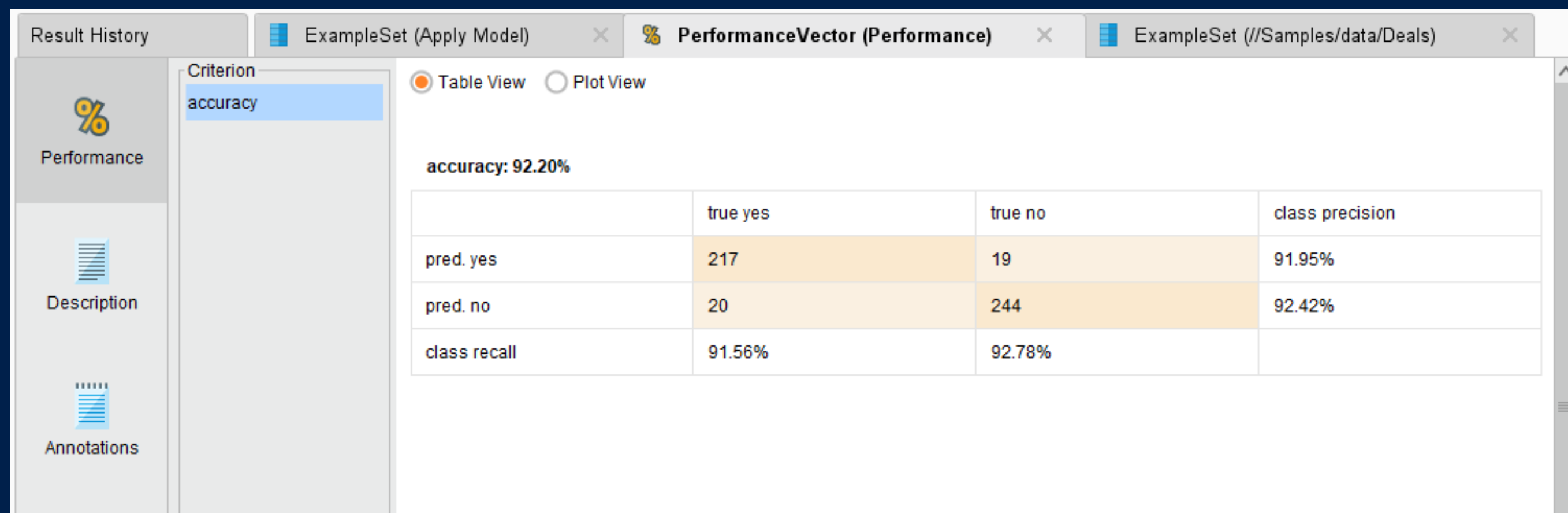
Result History | ExampleSet (Apply Model) | PerformanceVector (Performance) | ExampleSet (//Samples/data/Deals)

Open in: Turbo Prep | Auto Model | Filter (500 / 500 examples): all

Row No.	Future Cust...	prediction(F...	confidence{...	confidence{...	Age	Gender	Payment Me...
1	yes	yes	0.836	0.164	44	male	credit card
2	no	no	0.006	0.994	86	female	credit card
3	yes	yes	0.758	0.242	17	female	credit card
4	no	no	0.161	0.839	57	female	credit card
5	no	no	0.307	0.693	48	female	credit card
6	no	no	0.476	0.524	39	female	credit card
7	no	no	0.123	0.877	78	male	credit card
8	yes	yes	0.889	0.111	38	male	credit card
9	no	no	0.012	0.988	80	male	cheque
10	yes	yes	0.918	0.082	33	male	credit card
11	yes	yes	0.679	0.321	54	male	credit card
12	no	no	0.238	0.762	53	male	cash
13	no	no	0.102	0.898	63	male	cash
14	no	no	0.003	0.997	91	male	cash
15	yes	yes	0.758	0.242	17	female	credit card

ExampleSet (500 examples, 4 special attributes, 3 regular attributes)

# Naïve Bayes Result (Performance - Accuracy)



Result History | ExampleSet (Apply Model) | PerformanceVector (Performance) | ExampleSet (//Samples/data/Deals)

Criterion: accuracy

Table View  Plot View

**accuracy: 92.20%**

	true yes	true no	class precision
pred. yes	217	19	91.95%
pred. no	20	244	92.42%
class recall	91.56%	92.78%	



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# THANK YOU!!

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