

A tree inside the white-box

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Daily XP 1600

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A tree inside the white-box

Get ready to put your AI model interpretability skills to the test! Not all models are easily interpretable by humans, but white-box models like decision trees for classification are good examples of white-box models that offer remarkable interpretability.

Behold the visual depiction of a very straightforward decision tree model designed to classify penguin observations into three distinct species. Its predictions are based on a set of predictor attributes linked to each penguin specimen.

```
graph TD; A["Flipper length (mm) >= 207"] -- No --> B["Bill length (mm) >= 43"]; A -- Yes --> C["Island = Biscoe"]; B -- No --> D["Class: Adelle"]; B -- Yes --> E["Class: Chinstrap"]; C -- No --> F["Class: Chinstrap"]; C -- Yes --> G["Class: Gentoo"];
```

Only one of the four penguin observations below would be classified as **Adelle penguin** when being passed to this decision tree model. Can you find it?

Answer the question

50XP

Possible Answers

Select one answer

☒ Flipper length: 212mm; Bill length: 44mm; Island: Biscoe

PRESS 1

☐ Flipper length: 199mm; Bill length: 41mm; Island: Torgersen

PRESS 2

☐ Flipper length: 200mm; Bill length: 43mm; Island: Dream

PRESS 3

☐ Flipper length: 210mm; Bill length: 45mm; Island: Dream

PRESS 4

[Take Hint \(-15 XP\)](#)

Submit Answer

Get ready to put your AI model interpretability skills to the test! Not all models are easily interpretable by humans, but white-box models like decision trees for classification are good examples of white-box models that offer remarkable interpretability.

Behold the visual depiction of a very straightforward decision tree model designed to classify penguin observations into three distinct species. Its predictions are based on a set of predictor attributes linked to each penguin specimen.

Only one of the four penguin observations below would be classified as Adelie penguin when being passed to this decision tree model. Can you find it?

Answer:

The penguin classified as an Adelie penguin must satisfy the condition:

- Flipper length (mm) ≥ 207 : No
- Bill length (mm) ≥ 43 : No

Thus, the class is Adelie.

From the provided options, the correct answer is:

- Flipper length: 199mm; Bill length: 41mm; Island: Torgersen.