Don't be A mario

Poisonous Mushrooms Classifier
Fall 2018
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Forumulation

Yes, people died from eating wild mushrooms

2010 Data from American Associations of Poison Control Centers

Substance	Outcome None	Outcome Minor	Outcome Moderate	Outcome Major	Outcome Death
Mushroom	46200	17620	9560	460	20

*data only accounted about 5% of the actual deaths

Approach

- Categorical Data → 22 features && 8124 samples
- Hot coded 22 features → 109 characteristics (0/1)

    Approach 1

    - Linear regression → predict a value <=1
    - If value >= 0.5 → edible else poisonous

    Approach 2

    - Binary classification w/ perceptron
    - Classify 0/1

Evaluation && Interpretation

Linear Regression:

- Accuracy ~ 96%
- 12 K-Fold → average accuracy = 100%

Binary Classification (Perceptron):

- Accuracy ~ 93%
- 12 K-Fold → average accuracy ~ 96%

End Of Presentation

Thank you!