Mushroom
Donated on 4/26/1987

From Audobon Society Field Guide; mushrooms described in terms of physical characteristics; classification: poisonous or edible

Dataset Characteristics
Multivariate

Subject Area
Biology

Associated Tasks
Classification

Feature Type
Categorical

Instances
8124

Features
22

Dataset Information

Additional Information

This data set includes descriptions of hypothetical samples corresponding to 23 species of gilled mushrooms in the Agaricus and Lepiota Family (pp. 500-525). Each species is identified as definitely edible, definitely poisonous, or of unknown edibility and not recommended. This latter ...

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Has Missing Values?
Yes

Variables Table

Variable Name	Role	Type	Description	Units	
poisonous	Target	Categorical			
cap-shape	Feature	Categorical	bell=b,conical=c,convex=x,flat=f, knobbed=k,sunken=s		

Variable Name	Role	Type	Description	Units	
cap-surface	Feature	Categorical	fibrous=f,grooves=g,scaly=y,smooth=s		
cap-color	Feature	Binary	brown=n,buff=b,cinnamon=c,gray=g,green=r, pink=p,purple=u,red=e,white=w,yellow=y		
bruises	Feature	Categorical	bruises=t,no=f		
odor	Feature	Categorical	almond=a,anise=l,creosote=c,fishy=y,foul=f, musty=m,none=n,pungent=p,spicy=s		
gill-attachment	Feature	Categorical	attached=a,descending=d,free=f,notched=n		
gill-spacing	Feature	Categorical	close=c,crowded=w,distant=d		
gill-size	Feature	Categorical	broad=b,narrow=n		
gill-color	Feature	Categorical	black=k,brown=n,buff=b,chocolate=h,gray=g, green=r,orange=o,pink=p,purple=u,red=e, white=w,yellow=y		
stalk-shape	Feature	Categorical	enlarging=e,tapering=t		
stalk-root	Feature	Categorical	bulbous=b,club=c,cup=u,equal=e, rhizomorphs=z,rooted=r,missing=?	y	
stalk-surface-above-ring	Feature	Categorical	fibrous=f,scaly=y,silky=k,smooth=s		
stalk-surface-below-ring	Feature	Categorical	fibrous=f,scaly=y,silky=k,smooth=s		
stalk-color-above-ring	Feature	Categorical	brown=n,buff=b,cinnamon=c,gray=g,orange=o, pink=p,red=e,white=w,yellow=y		
stalk-color-below-ring	Feature	Categorical	brown=n,buff=b,cinnamon=c,gray=g,orange=o, pink=p,red=e,white=w,yellow=y		
veil-type	Feature	Binary	partial=p,universal=u		
veil-color	Feature	Categorical	brown=n,orange=o,white=w,yellow=y		

Variable Name	Role	Type	Description	Units	
ring-number	Feature	Categorical	none=n,one=o,two=t		
ring-type	Feature	Categorical	cobwebby=c,evanescent=e,flaring=f,large=l, none=n,pendant=p,sheathing=s,zone=z		
spore-print-color	Feature	Categorical	black=k,brown=n,buff=b,chocolate=h,green=r, orange=o,purple=u,white=w,yellow=y		
population	Feature	Categorical	abundant=a,clustered=c,numerous=n, scattered=s,several=v,solitary=y		
habitat	Feature	Categorical	grasses=g,leaves=l,meadows=m,paths=p, urban=u,waste=w,woods=d		

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Additional Variable Information ⌃

  1. cap-shape: bell=b,conical=c,convex=x,flat=f, knobbed=k,sunken=s
  2. cap-surface: fibrous=f,grooves=g,scaly=y,smooth=s
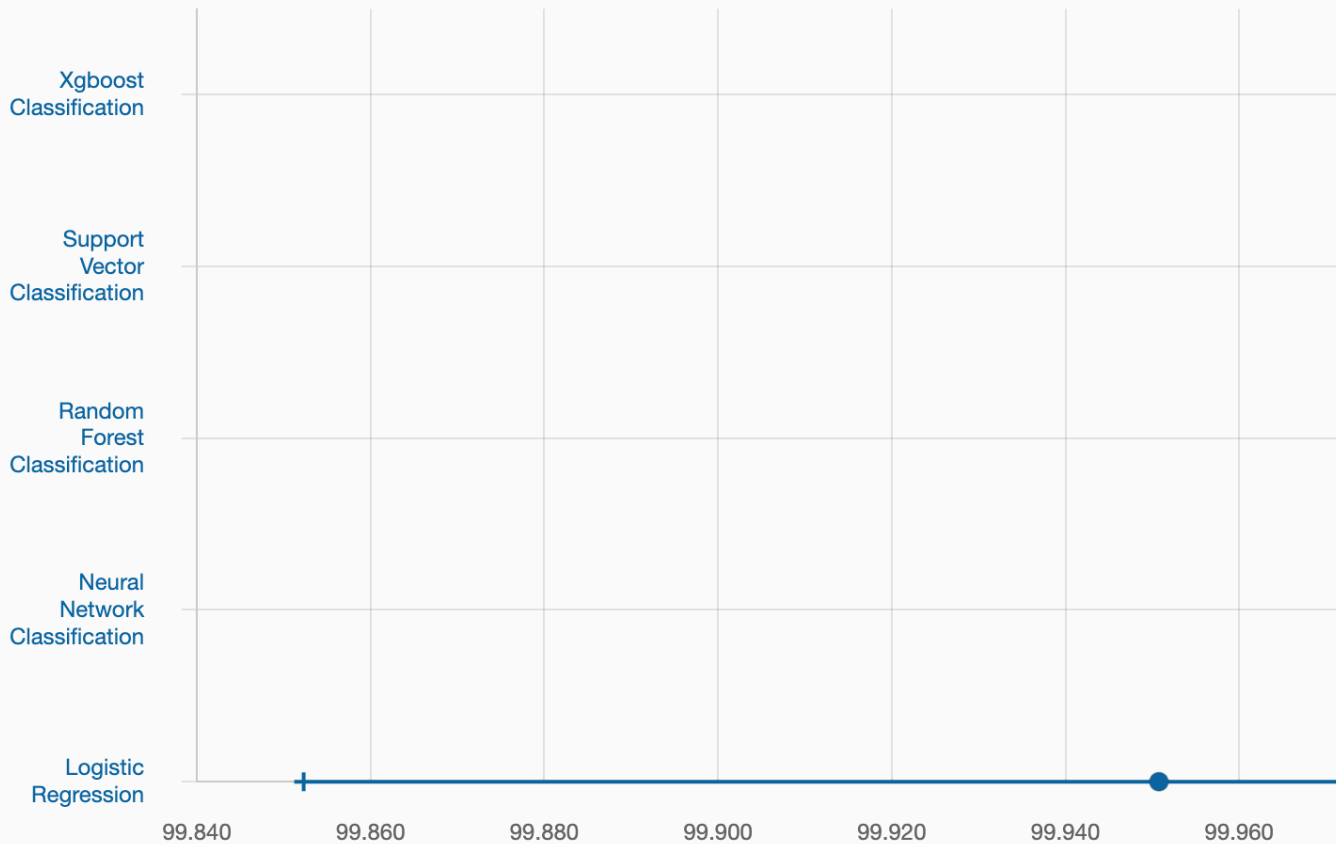 3. cap-color: brown=n,buff=b,cinnamon=c,gray=g,green=r, …

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Class Labels
edible=e, poisonous=p

Baseline Model Performance ⌃

Accuracy	Precision

| | 99.840 | 99.860 | 99.880 | 99.900 | 99.920 | 99.940 | 99.960 |

Xgboost Classification

Support Vector Classification

Random Forest Classification

Neural Network Classification

Logistic Regression

Dataset Files ⌃

File	Size
agaricus-lepiota.data	364.9 KB
expanded.Z	109 KB
agaricus-lepiota.names	6.7 KB
README	853 Bytes
Index	193 Bytes

Papers Citing this Dataset ⌃

SORT BY YEAR, DESC

topFiberM: Scalable and Efficient Boolean Matrix Factorization
By Abdelmoneim Desouki, Michael Roder, Axel-Cyrille Ngomo. 2019
Published in ArXiv.

Estimating Risk and Uncertainty in Deep Reinforcement Learning
By William Clements, Benoit-Marie Robaglia, Bastien Delft, Reda Slaoui, S'ebastien Toth. 2019
Published in ArXiv.

High-Performance Support Vector Machines and Its Applications
By Taiping He, Tao Wang, Ralph Abbey, Joshua Griffin. 2019
Published in ArXiv.

Bayesian Learning of Neural Network Architectures
By Georgi Dikov, Patrick Smagt, Justin Bayer. 2019
Published in ArXiv.

Edibility Detection of Mushroom Using Ensemble Methods
By Nusrat Pinky, S. Islam, Rafia Alice. 2019
Published in International Journal of Image, Graphics and Signal Processing.

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Reviews   ⌃

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CITE

❝ 77 citations
👁 152823 views

Keywords

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DOI

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