

Mushrooms

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Introduction

This section includes an introduction to the project motivation, data, and research question.

The research question and motivation are clearly stated in the introduction, including citations.

The primary goal of this project is to best predict whether or not a mushroom is poisonous depending on various physical characteristics, rarity, and habitat of the fungus. The data set consists of 8124 hypothetical samples, constructed from the Audobon Society Field Guide. The samples correspond to 23 species of mushrooms from the Agaricus and Lepiota Families. Each mushroom is categorized as either poisonous or edible, with mushrooms ‘not recommended for eating’ or of unknown edibility are counted as poisonous. Though the observations are hypothetical mushrooms, analyzing them can still provide beneficial results that can be applied to help identify the edibility of the near 14,000 existing species of mushrooms.

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, pink=p,purple=u,red=e,white=w,yellow=y
4. bruises?:	bruises=t,no=f
5. odor:	almond=a,anise=l,creosote=c,fishy=y,foul=f, musty=m,none=n,pungent=p,spicy=s
6. gill-attachment:	attached=a,descending=d,free=f,notched=n
7. gill-spacing:	close=c,crowded=w,distant=d
8. gill-size:	broad=b,narrow=n
9. gill-color:	black=k,brown=n,buff=b,chocolate=h,gray=g, green=r,orange=o,pink=p,purple=u,red=e, white=w,yellow=y
10. stalk-shape:	enlarging=e,tapering=t

11. stalk-root:	bulbous=b,club=c,cup=u,equal=e, rhizomorphs=z,rooted=r,missing=
12. stalk-surface-above-ring:	fibrous=f,scaly=y,silky=k,smooth=s
13. stalk-surface-below-ring:	fibrous=f,scaly=y,silky=k,smooth=s
14. stalk-color-above-ring:	brown=n,buff=b,cinnamon=c,gray=g,orange=o, pink=p,red=e,white=w,yellow=y
15. stalk-color-below-ring:	brown=n,buff=b,cinnamon=c,gray=g,orange=o, pink=p,red=e,white=w,yellow=y
16. veil-type:	partial=p,universal=u
17. veil-color:	brown=n,orange=o,white=w,yellow=y
18. ring-number:	none=n,one=o,two=t
19. ring-type:	cobwebby=c,evanescent=e,flaring=f,large=l, none=n,pendant=p,sheathing=s,zone=z
20. spore-print-color:	black=k,brown=n,buff=b,chocolate=h,green=r, orange=o,purple=u,white=w,yellow=y
21. population:	abundant=a,clustered=c,numerous=n, scattered=s,several=v,solita
22. habitat:	grasses=g,leaves=l,meadows=m,paths=p, urban=u,waste=w,woods=d

Citations Mushroom. (1987). UCI Machine Learning Repository. <https://doi.org/10.24432/C5959T>.

```
mushrooms <- read.csv("Mushrooms - Sheet1.csv")
library(tidymodels)
library(tidyverse)
```