

## Data. Description

### 1. Sources:

- (a) Mushroom species drawn from sourcebook: Patrick Hardin. Mushrooms & Toadstools. Zondervan, 1999
- (b) Inspired by this mushroom data: Jeff Schlimmer. Mushroom Data Set. Apr. 1987.  
URL: <https://archive.ics.uci.edu/ml/datasets/Mushroom>.
- (c) Repository containing the related Python scripts and all the data sets:  
<https://mushroom.mathematik.uni-marburg.de/files/>
- (d) Author: Dennis Wagner
- (e) Date: 05 September 2020

### 2. Relevant information:

This dataset includes 61069 hypothetical mushrooms with caps based on 173 species (353 mushrooms per species). Each mushroom is identified as definitely edible, definitely poisonous, or of unknown edibility and not recommended (the latter class was combined with the poisonous class). Of the 20 variables, 17 are nominal and 3 are metrical.

### 3. Class information:

- 1. class: poisonous=p, edible=e (binary)

### 4. Variable Information:

(n: nominal, m: metrical; nominal values as sets of values)

- 1. cap-diameter (m): float number in cm
- 2. cap-shape (n): bell=b, conical=c, convex=x, flat=f, sunken=s, spherical=p, others=o
- 3. cap-surface (n): fibrous=i, grooves=g, scaly=y, smooth=s, shiny=h, leathery=l, silky=k, sticky=t, wrinkled=w, fleshy=e
- 4. cap-color (n): brown=n, buff=b, gray=g, green=r, pink=p, purple=u, red=e, white=w, yellow=y, blue=l, orange=o, black=k
- 5. does-bruise-bleed (n): bruises-or-bleeding=t, no=f
- 6. gill-attachment (n): adnate=a, adnexed=x, decurrent=d, free=e, sinuate=s, pores=p, none=f, unknown=?
- 7. gill-spacing (n): close=c, distant=d, none=f
- 8. gill-color (n): see cap-color + none=f
- 9. stem-height (m): float number in cm
- 10. stem-width (m): float number in mm
- 11. stem-root (n): bulbous=b, swollen=s, club=c, cup=u, equal=e, rhizomorphs=z, rooted=r
- 12. stem-surface (n): see cap-surface + none=f
- 13. stem-color (n): see cap-color + none=f

- 14. veil-type (n): partial=p, universal=u
- 15. veil-color (n): see cap-color + none=f
- 16. has-ring (n): ring=t, none=f
- 17. ring-type (n): cobwebby=c, evanescent=e, flaring=r, grooved=g,  
large=l, pendant=p, sheathing=s, zone=z, scaly=y,  
movable=m, none=f, unknown=?
- 18. spore-print-color (n): see cap color
- 19. habitat (n): grasses=g, leaves=l, meadows=m, paths=p, heaths=h,  
urban=u, waste=w, woods=d
- 20. season (n): spring=s, summer=u, autumn=a, winter=w