1. cap-shape:
   * bell=b 0
   * conical=c 1
   * convex=x 2
   * flat=f 3
   * knobbed=k 4
   * sunken=s 5
2. cap-surface:
   * fibrous=f 0
   * grooves=g 1
   * scaly=y 2
   * smooth=s 3
3. cap-color:
   * brown=n 0
   * buff=b 1
   * cinnamon=c 2
   * gray=g 3
   * green=r 4
   * pink=p 5
   * purple=u 6
   * red=e 7
   * white=w 8
   * yellow=y 9
4. bruises?:
   * no=f 0
   * bruises=t 1
5. odor:
   * almond=a 0
   * anise=l 1
   * creosote=c 2
   * fishy=y 3
   * foul=f 4
   * musty=m 5
   * none=n 6
   * pungent=p 7
   * spicy=s 8
6. gill-attachment:
   * attached=a 0
   * descending=d 1
   * free=f 2
   * notched=n 3
7. gill-spacing:
   * close=c 0
   * crowded=w 1
   * distant=d 2
8. gill-size:
   * broad=b 0
   * narrow=n 1
9. gill-color:
   * black=k 0
   * brown=n 1
   * buff=b 2
   * chocolate=h 3
   * gray=g 4
   * green=r 5
   * orange=o 6
   * pink=p 7
   * purple=u 8
   * red=e 9
   * white=w 10
   * yellow=y 11
10. stalk-shape:
    * enlarging=e 0
    * tapering=t 1
11. stalk-root:
    * bulbous=b 0
    * c lub=c 1
    * cup=u 2
    * equal=e 3
    * rhizomorphs=z 4
    * rooted=r 5
    * missing=? 6
12. stalk-surface-above-ring:
    * fibrous=f 0
    * scaly=y 1
    * silky=k 2
    * smooth=s 3

13. stalk-surface-below-ring:

* + fibrous=f 0
  + scaly=y 1
  + silky=k 2
  + smooth=s 3

14. stalk-color-above-ring:

* + brown=n 0
  + buff=b 1
  + cinnamon=c 2
  + gray=g 3
  + orange=o 4
  + pink=p 5
  + red=e 6
  + white=w 7
  + yellow=y 8

15. stalk-color-below-ring:

* + brown=n 0
  + buff=b 1
  + cinnamon=c 2
  + gray=g 3
  + orange=o 4
  + pink=p 5
  + red=e 6
  + white=w 7
  + yellow=y 8

16.veil-type:

* + partial=p 0
  + universal=u 1

17. veil-color:

* + brown=n 0
  + orange=o 1
  + white=w 2
  + yellow=y 3

18. ring-number:

* + none=n 0
  + one=o 1
  + two=t 2

19. ring-type:

* + cobwebby=c 0
  + evanescent=e 1
  + flaring=f 2
  + large=l, 3
  + none=n 4
  + pendant=p 5
  + sheathing=s 6
  + zone=z 7

20. spore-print-color:

* + black=k 0
  + brown=n 1
  + buff=b 2
  + chocolate=h 3
  + green=r 4
  + orange=o 5
  + purple=u 6
  + white=w 7
  + yellow=y 8

21. population:

* + abundant=a 0
  + clustered=c 1
  + numerous=n 2
  + scattered=s 3
  + several=v 4
  + solitary=y 5

22. habitat:

* + grasses=g 0
  + leaves=l 1
  + meadows=m 2
  + paths=p 3
  + urban=u 4
  + waste=w 5
  + woods=d 6