Case Study on Probability for Data Science

Problem Statement: To make a suitable machine learning algorithm to predict if the mushroom is edible or poisonous (e or p) using the given dataset.
(Along with other ML algorithms, Naïve Bayes' Classifier should be applied)
Also, if some data pre-processing is necessary do that as well.

Attribute Information:

- cap-shape: bell=b, conical=c, convex=x, flat=f, knobbed=k, sunken=s
- cap-surface: fibrous=f, grooves=g, scaly=y, smooth=s
- cap-colour:
  brown=n, buff=b,
cinnamon=c,gray=g,green=r,pink=p,purple=u,red=e,white=w,yellow=y
- bruises: bruises=t, no=f
- odour:
  almond=a,anise=l,creosote=c,fishy=y,foul=f,musty=m,none=n,pungent=p, spicy=s
- gill-attachment: attached=a, descending=d, free=f, notched=n
- gill-spacing: close=c, crowded=w, distant=d
- gill-size: broad=b, narrow=n
- gill-colour: black=k, brown=n, buff=b, chocolate=h, grey=g, green=r, orange=o, pink=p, purple=u, red=e, white=w, yellow=y
- stalk-shape: enlarging=e, tapering=t
- Stalk-root: bulbous=b, club=c, cup=u, equal=e, rhizomorphs=z, rooted=r, missing=?
- stalk-surface-above-ring: fibrous=f, scaly=y, silky=k, smooth=s
- stalk-surface-below-ring: fibrous=f, scaly=y, silky=k, smooth=s
- stalk-colour-above-ring:
  brown=n,buff=b,cinnamon=c,gray=g,orange=o,pink=p,red=e,white=w, yellow=y
- stalk-colour-below-ring:
  brown=n,buff=b,cinnamon=c,gray=g,orange=o,pink=p,red=e,white=w, yellow=y
- veil-type: partial=p, universal=u
- veil-colour: brown=n, orange=o, white=w, yellow=y

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

Submit the. ipynb file in Paatshala.
Keep your name as the file name.