Deliverable 3

1. Final Training Results :
   I did not change my model since the previous deliverable. I could not reach an accuracy higher than the approximately 98% reached previously.

   Here are the final results :

   Training score: 97.9%

   Testing score: 97.6%

   I do not have a validation set (my training and testing sets are obtained from the original dataset, I do not have a second independent dataset), which is very unfortunate. However, this dataset was created using hypothetical mushrooms. This leads me to presume that my accuracy would not significantly drop if I were to test it for a validation set.

   Here is the confusion matrix :

```
array([[851,   1],
       [ 38, 735]], dtype=int64)
```

   It is interesting to note that the false-positive rate is significantly higher than the false-negative rate. I honestly could not figure out why it is the case by examining the SVM model. Generally speaking, the model is very accurate, and I am satisfied with it.

2. I used an html page and a css page for the styles. I also used flask in my python code to be able to send the input from the html to my python function. It was rough for me to use flask and to setup the webapp, as it is my first time doing so. I learned how to do it all through YouTube and online forums (stackexchange, etc.) For the model, I tried a naïve bayes approach, a random forest classifier and the SVM classifier. I finally settled on the SVM classifier because it was the simplest and the most accurate model.