Homework 07

Consider the wine dataset classification problem from Homework 05.

1. Use pyro to write a multinomial bayesian logistic regression model[1] on 5 predictors of your choice from the available features. You should define both a `guide()` function and a `model()` function.
2. Run SVI inference with pyro `Adam` optimizer on the training data. Then plot the ELBO loss using `matplotlib.plot` function.
3. Evaluate your model on the test data: compute the overall test accuracy and the class-wise accuracy for the three different wine categories.

[1] Section "Bayesian logistic regression" in notebook 07.