Franchises Analysis

The provided dataset "Franchises Dataset" contains data collected from different 100 franchises. The data contains the net profit (million $) for each franchise, the counter sales (million $), the drive-through sales (million $), the number of customers visiting the business daily, the type of the franchise, and the location of the franchise.

Address the following questions:

a) Develop a decision tree model for the net profit (Here's a sample DT model). Assess the accuracy of the model (Here's a reference link).

b) Simulate the decision tree and visualize and interprete the impact of the descriptive features as a root node.

c) Develop a Random Forest (RF) prediction model for the net profit.

d) Rationalize the selected structure of the model.

e) Simulate the model parameters and visualize and interpret the impact of the descriptive features.

f) What is the forecast of the net profit, if the counter sales are 500,000 $, drive-through sales are 700,000$, and the franchise is a pizza store located in Richmond, using both models (Decision Tree and Random Forest). Comment on the forecasted value.

g) What are the roles of the "max_feature" and the "n_estimators" parameters in the random forest.

h) What are the assumptions and limitations of the models?

Data Analysis and Visualization Tools:

It is recommended to use Python for this assignment.