Take-Home Quiz 6 (Interpretable Learning)

1. For the following scenarios, choose the best technique. You must explain your choice and write the scope and model-specific/agnostic of the selected technique in every scenario. (**Hint:** You could limit your techniques to Lime, Anchor, Decision Tree, and Shapely)

   - You have the training dataset of a hospital's triage, and we know that the data is iid. Your goal is to develop an explainable model which decides whether a patient is the next in the line to be treated or not.

   - We have a car rental business, feeding our data to the black-box machine learning model. It gives us some prediction on which days it is more probable to rent cars more than average but without any explanation. We only have access to some of the most important local variables and want a simplified explanation to describe the average behavior of the complex machine-learned approach.

2. Please fill the blank spaces on the table below.

Model	Simulability	Decomposebility	Algorithm Transparency	Post-hoc Analysis
Linear/Logistic Regression	...	...	...	...
Decision Tree	...	...	...	...
KNN	...	...	...	...
Bayesian Models	...	...	...	...
Tree Ensemble (Forest)	-	...	...	...
Support Vector Machines	...	...	...	...
Multi-Layer Network	...	...	...	...
Convolutional Neural Network	...	...	...	...
Recurrent Neural Network	...	...	...	...