

ISTE_ML week4 Assignment 201IT236

1. The data given can be one-hot encoded to convert the same into numerical form. The same can then be processed through KNN algorithm.

2. Z-Score=2,

$P(x < Z) = 0.97725 \rightarrow 97.725\%$ of the trees are shorter than 120cm.

$P(x > Z) = 0.02275 \rightarrow 2.275\%$ of the trees are taller than 120cm.

Hence, it is uncommon for a tree to have height=120cm.

3. Z-score=0.47

$P(x < Z) = 0.68082 \rightarrow 68.8\%$ of socks are shorter than the given value.

$P(x > Z) = 0.31918 \rightarrow 31.918\%$ of socks are longer than the given value.

4. Given $P(x < Z) = 0.96$,

$\Rightarrow Z = 1.751$

Simplifying, we get the required dead weight lift to get pro card to be 540lbs.

5. The problem has been solved in an pynb file.