meaning_of_features_in_random_forest

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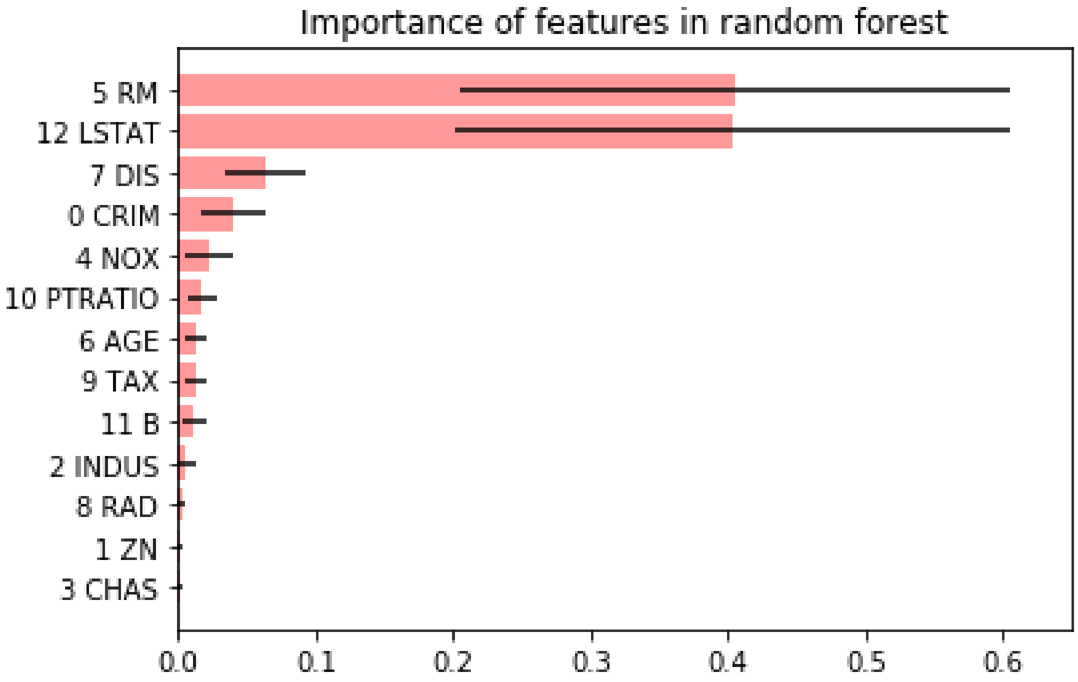
In [5]: from sklearn.datasets import load_boston
        from sklearn.ensemble import RandomForestRegressor
        import matplotlib.pyplot as plt
        import numpy as np
        boston = load_boston()
        X,y = boston.data, boston.target
        feature_names = np.array([' '.join([str(b),a]) for a,b in zip(boston.feature_names, ran
        RF = RandomForestRegressor(n_estimators=100, random_state=101).fit(X,y)

        feature_importances = [tree.feature_importances_ for tree in RF.estimators_]
        importance = np.mean(feature_importances, axis=0)
        std = np.std(feature_importances, axis=0)
        indices = np.argsort(importance)
        range_ = range(len(importance))
        plt.figure()
        plt.title("Importance of features in random forest")
        plt.barh(range_, importance[indices], color='r', xerr=std[indices], alpha=0.4, align='
        plt.yticks(range(len(importance)), feature_names[indices])
        plt.ylim([-1, len(importance)])
        plt.xlim([0.0,0.65])
        plt.show()
```



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In [8]: from sklearn.ensemble.partial_dependence import plot_partial_dependence
        from sklearn.ensemble import GradientBoostingRegressor
        GBM = GradientBoostingRegressor(n_estimators=100, random_state=101).fit(X, y)
        features = [5,12,(5,12)]
        fig, axis = plot_partial_dependence(GBM, X, features, feature_names=feature_names)
```

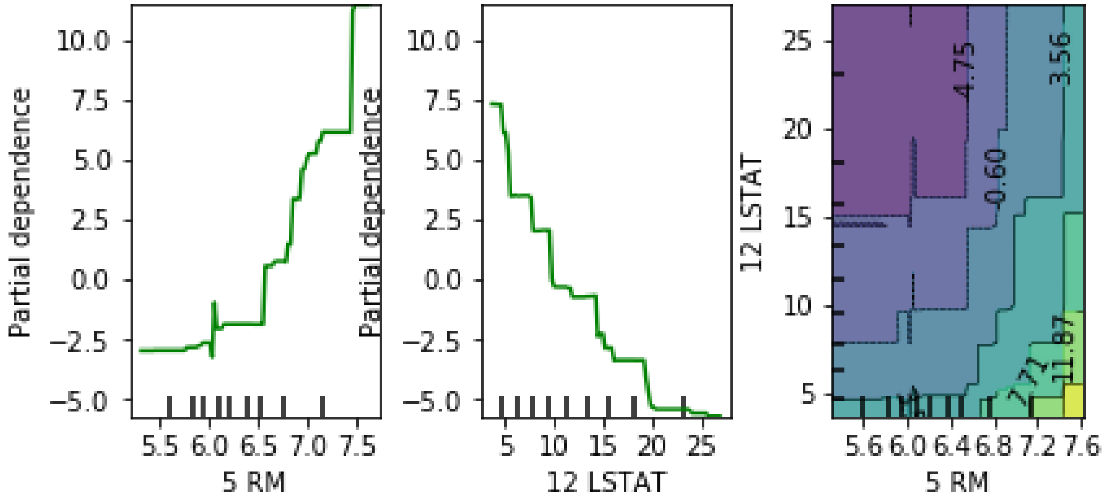

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In [ ]:
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