Evaluation of model

·Strengths

Our model takes the least coefficients into consideration as well as keeps most of effective information. According to the sensitivity analysis, when moving away one coefficient, the R2 reduces greatly.

Our model havs a perfect complementarity. It can be applied into the situation of big data, because we have trained a random forest model so that we can input the data set and get the results rapidly. However, the random forest has really bad explanation to its result, hiding the mathematical relationship. In comparison, the multiple linear regression model has a solid math foundation, which can be accepted more easily. But its accuracy of prediction and the ability to deal big data is worse than the random forest model. We use both models so that we can combine their advantages and avoid disadvantages.

Possible improvements

The model simply uses regional economic indicators to measure，and ignores Humanistic factor。事实上 ，即使是同样靠海的城市，在游玩的方式选择上也有区别。有的城市居民总体上喜欢选择sailboat作为出海工具进行一个短期的旅行，但也有城市的居民大多数只能接受乘坐快艇感受速度带来的乐趣。

The model 对区域效应的刻画较为粗糙，只从所有帆船挂牌价的均值角度考虑，仅仅能反映该地区帆船挂牌价的相对水平。但是区域效应当还包含对不同类型帆船的偏好等。

Future discussion

We can use more regression algorithms to compare which one is better. For example, the artificial neutral networks is a 应用广泛、前景光明的算法，能够进行精度很高的回归与预测。此外，鉴于线性回归过于简单，很多情况下并不能反映真实世界的情况，可以采用适用性更好的非线性回归模型。通过比较不同的模型，取长补短，我们能够对二手帆船市场有更好的了解。