



WINE REVIEWS ANALYSIS



HYPOTHESIS

Hypothesis 1: Europe has higher mean price than the rest of the world

h_0 : Europe price mean = World price mean

h_a : Europe price mean > World price mean

Hypothesis 2: Europe has higher rated wines

h_0 : Europe = World

h_a : Europe > World

Hypothesis 3: Most of the top varieties of wines are produced in Europe

h_0 : Not in Europe

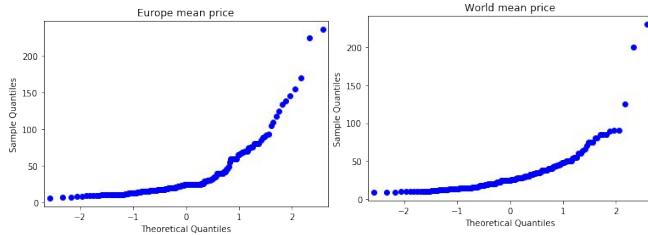
h_a : in Europe

QUESTION 1 (INDEPENDENT T-TEST)

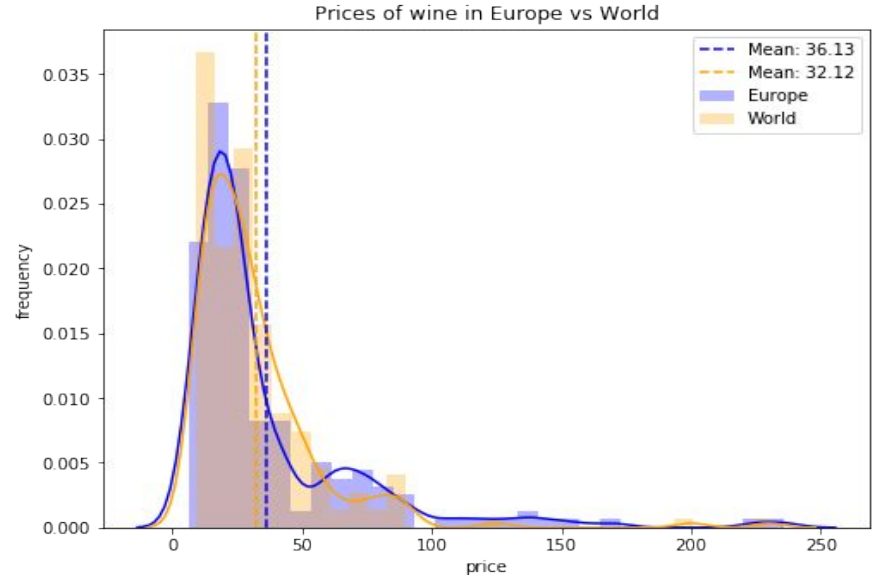
Hypothesis 1: Europe has higher mean price than the rest of the world

H_0 : Europe price mean = World price mean

H_a : Europe price mean > World price mean



Conclusion: p value is less than 0.05 so the null hypothesis can be rejected.



```
Ttest_indResult(statistic=-2.0119086689795216, pvalue=0.04490298598989527)
```

QUESTION 2 (WELCH'S T-TEST)

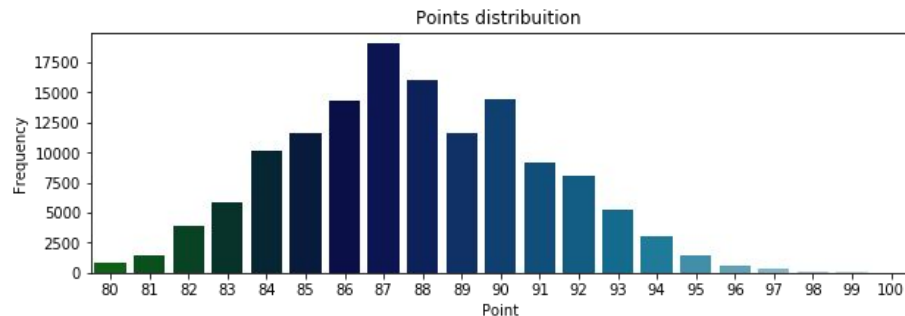
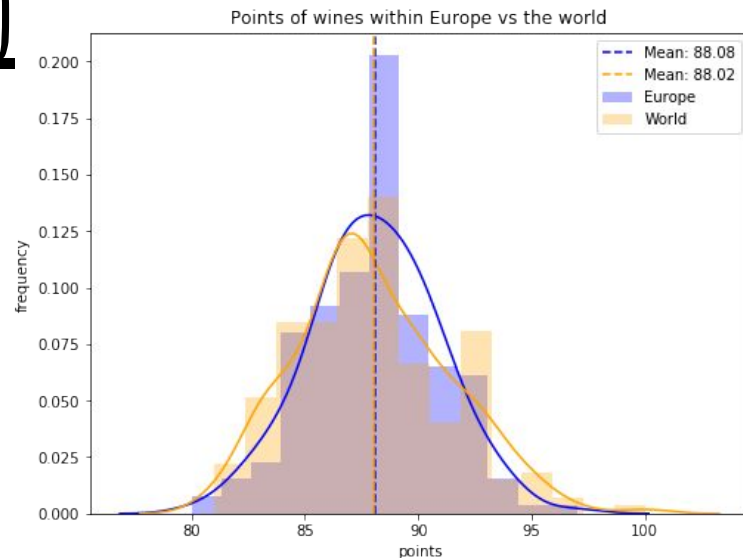
Hypothesis 2: Europe has higher rated wines

H_0 : Europe = World

H_a : Europe > World

```
welch's t-test = 2.199840777120416  
p-value: 0.030192297369301624  
DoF: 97.02559500211275  
Decision: Reject the null hypothesis  
Cohens'd: 0.4444349517235801  
Effect Size: Small
```

Conclusion: from the results of the t-test we can reject the null hypothesis and say that Europe does have some of the best rated wines.



QUESTION 3 (ANOVA)

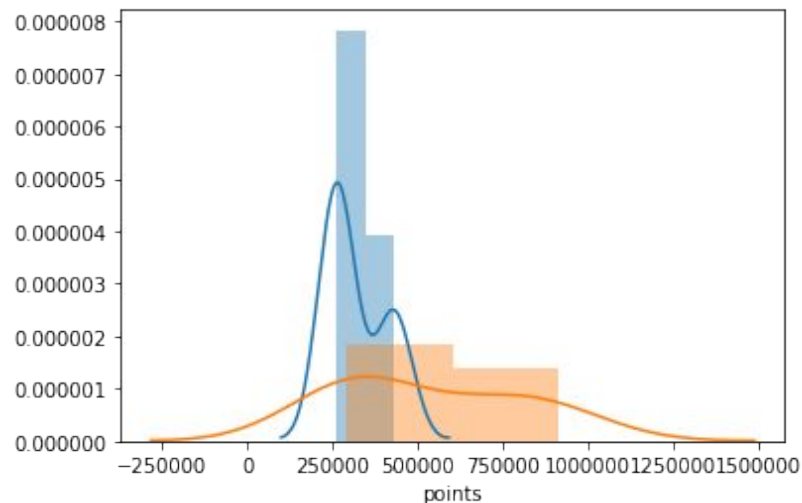
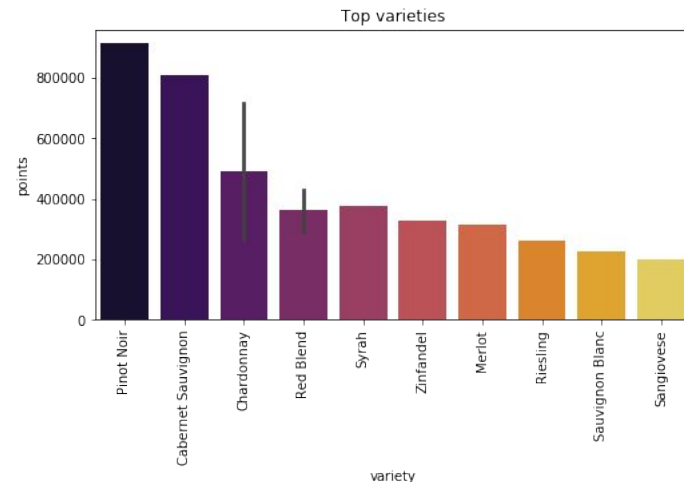
Hypothesis 3: Most of the top varieties of wines are produced in Europe

H_0 : Not in Europe

H_a : in Europe

	df	sum_sq	mean_sq	F	PR(>F)
C(continent)	1.0	9.832039e+10	9.832039e+10	1.143838	0.478627
variety	7.0	3.598844e+11	5.141206e+10	0.598117	0.762982
Residual	1.0	8.595656e+10	8.595656e+10	NaN	NaN

Conclusion: since the p values were greater than 0.05 i can accept the null hypothesis and say that the top varieties of wine are not produced in Europe despite Europe having the most expensive wines, and the highest mean in points as conducted from the previous two tests.



FUTURE WORK

For future work:

- Review and further look into the point system, and the methods used to obtain such points for each of the wine varieties.
- Look into why certain wine varieties earn better ratings in some countries but not in others.