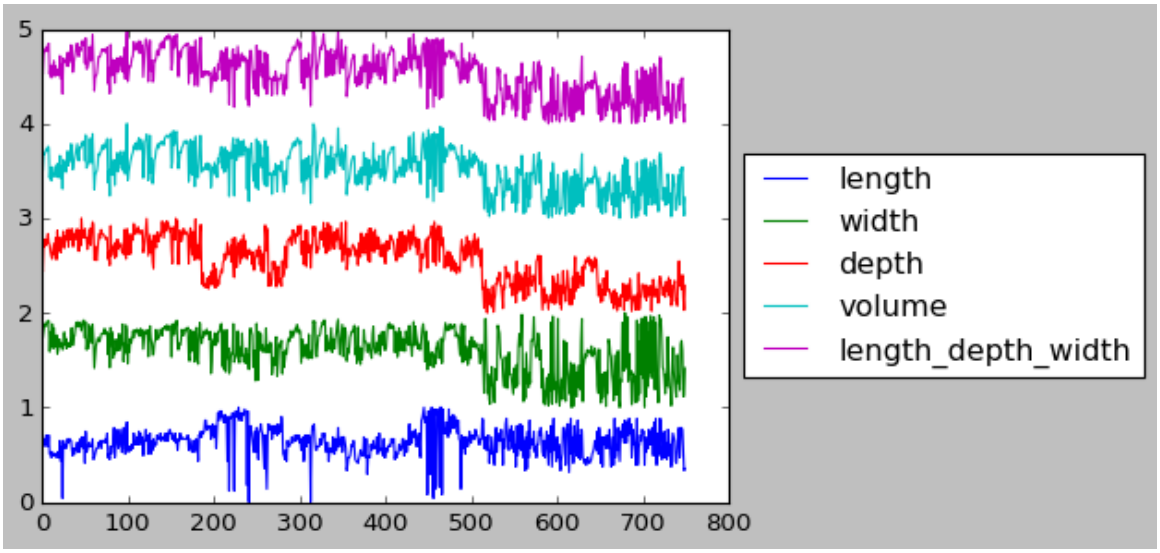
1 Averages

1.1 tables



2 IDEA Regression

2.1 Simple Reg

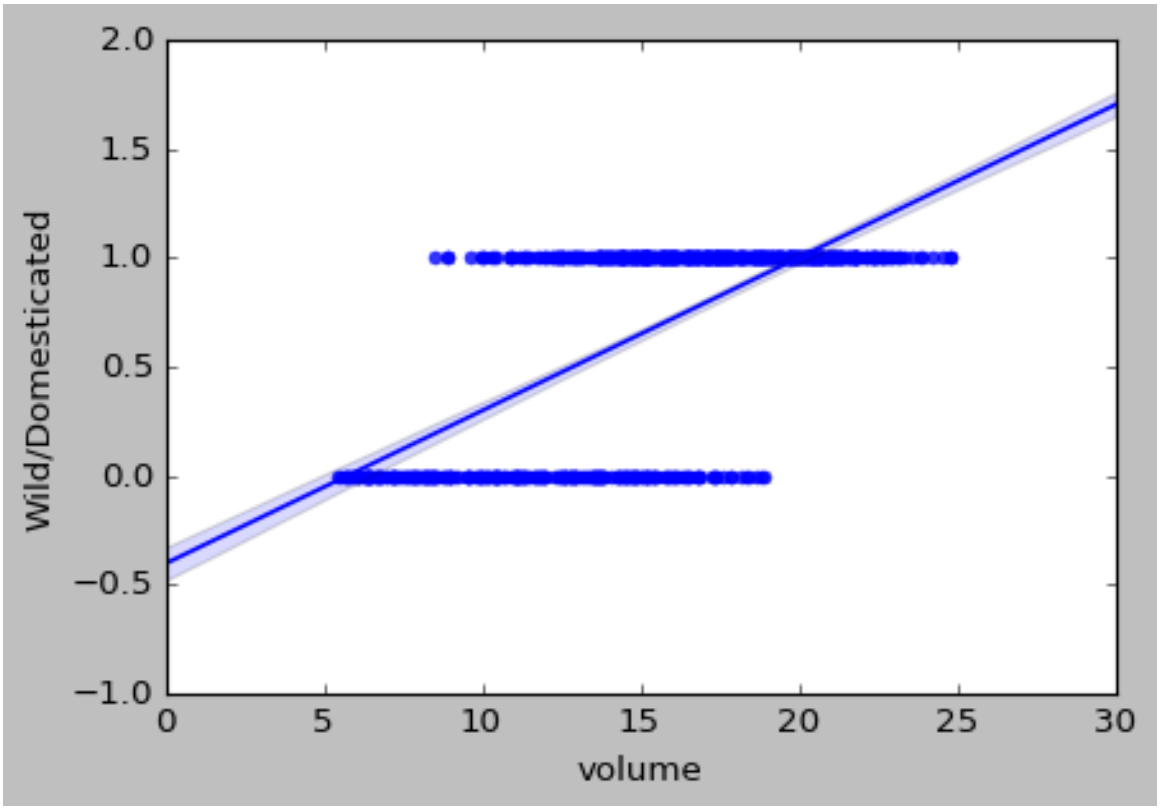
OLS Regression Results

Dep. Variable:	Wild/Domesticated	R-squared:	0.800
Model:	OLS	Adj. R-squared:	0.800
Method:	Least Squares	F-statistic:	2998.
Date:	Thu, 02 Aug 2018	Prob (F-statistic):	4.55e-264
Time:	09:22:22	Log-Likelihood:	-318.03
No. Observations:	750	AIC:	638.1
Df Residuals:	749	BIC:	642.7
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
volume	0.0460	0.001	54.755	0.000	0.044	0.048

Omnibus:	128.141	Durbin-Watson:	0.272
Prob(Omnibus):	0.000	Jarque-Bera (JB):	75.849
Skew:	-0.646	Prob(JB):	3.39e-17
Kurtosis:	2.130	Cond. No.	1.00

Warnings:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.



2.2 Playing with constants

```
                            OLS Regression Results
==============================================================================
Dep. Variable:      Wild/Domesticated   R-squared:                       0.800
Model:                            OLS   Adj. R-squared:                  0.800
Method:                 Least Squares   F-statistic:                     2998.
Date:                Thu, 02 Aug 2018   Prob (F-statistic):          4.55e-264
Time:                        09:22:24   Log-Likelihood:                -318.03
No. Observations:                 750   AIC:                             638.1
Df Residuals:                     749   BIC:                             642.7
Df Model:                           1
Covariance Type:            nonrobust
==============================================================================
                 coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------
volume         0.0460      0.001     54.755      0.000       0.044       0.048
==============================================================================
Omnibus:                      128.141   Durbin-Watson:                   0.272
Prob(Omnibus):                  0.000   Jarque-Bera (JB):               75.849
Skew:                          -0.646   Prob(JB):                     3.39e-17
Kurtosis:                       2.130   Cond. No.                         1.00
==============================================================================

Warnings:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
```

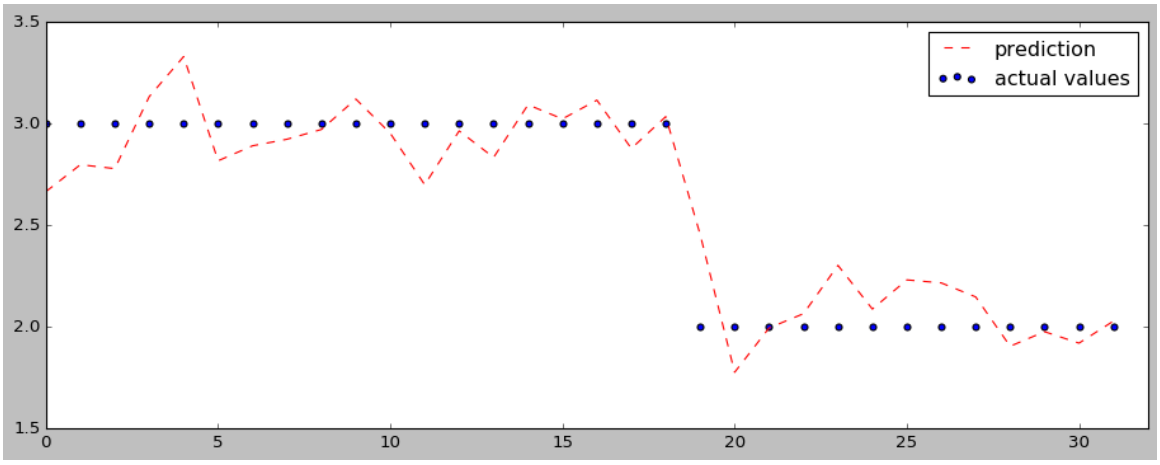
2.3 Potentially useful for modelling Ploidy/DomStatus

```
                            OLS Regression Results
==============================================================================
Dep. Variable:     Ploidy/Domestication   R-squared:                       0.864
Model:                              OLS   Adj. R-squared:                  0.831
```

```
Method:                      Least Squares   F-statistic:                     26.39
Date:                   Thu, 02 Aug 2018   Prob (F-statistic):           1.14e-09
Time:                           09:22:25   Log-Likelihood:                  9.2250
No. Observations:                     32   AIC:                            -4.450
Df Residuals:                         25   BIC:                             5.810
Df Model:                              6
Covariance Type:               nonrobust
================================================================================
                     coef    std err          t      P>|t|      [0.025      0.975]
--------------------------------------------------------------------------------
length               0.5593      0.458      1.220      0.234      -0.385       1.503
width                0.6781      0.642      1.056      0.301      -0.645       2.001
depth                1.6848      1.197      1.408      0.172      -0.780       4.149
length_depth_width  -0.0526      0.073     -0.724      0.476      -0.202       0.097
surface_area         0.0848      0.023      3.708      0.001       0.038       0.132
volume              -0.1173      0.101     -1.162      0.256      -0.325       0.091
const               -5.5150      4.020     -1.372      0.182     -13.795       2.765
==============================================================================
Omnibus:                        0.911   Durbin-Watson:                   1.626
Prob(Omnibus):                  0.634   Jarque-Bera (JB):                0.703
Skew:                          -0.351   Prob(JB):                        0.704
Kurtosis:                       2.815   Cond. No.                     6.15e+03
==============================================================================

Warnings:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
[2] The condition number is large, 6.15e+03. This might indicate that there are
strong multicollinearity or other numerical problems.
```

```
(0, 32)
```

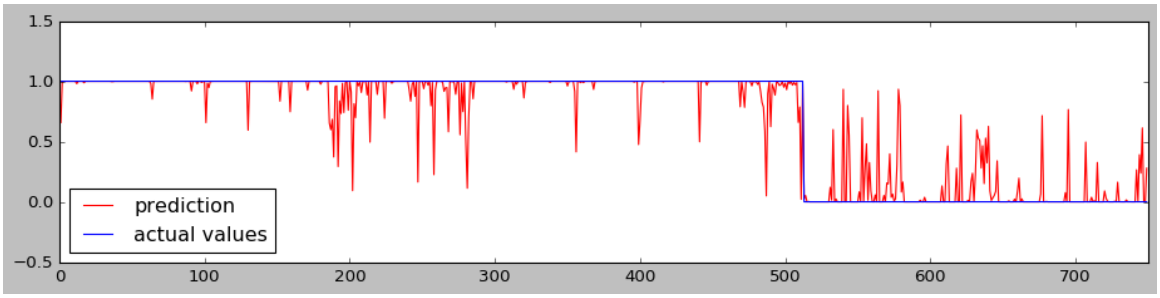


2.4 GLM for W/D

```
R2 = 0.8689288094842893
                 Generalized Linear Model Regression Results
==============================================================================
Dep. Variable:      Wild_Domesticated   No. Observations:                  750
Model:                            GLM   Df Residuals:                      719
Model Family:                Binomial   Df Model:                           30
Link Function:                  logit   Scale:                          1.0000
Method:                          IRLS   Log-Likelihood:                    nan
Date:                Thu, 02 Aug 2018   Deviance:                          nan
Time:                        09:22:26   Pearson chi2:                      202.
No. Iterations:                   100   Covariance Type:            nonrobust
==============================================================================
```

	coef	std err	z	P>|z|	[0.025	0.9
surface_area	-501.9311	245.503	-2.045	0.041	-983.108	-
20.754						
length	-113.1669	457.709	-0.247	0.805	-1010.260	783.
surface_area:length	86.6632	37.397	2.317	0.020	13.367	159.
depth	484.1320	670.684	0.722	0.470	-830.384	1798.
surface_area:depth	271.4883	140.433	1.933	0.053	-3.756	546.
length:depth	-2.2968	274.270	-0.008	0.993	-539.856	535.
surface_area:length:depth	-46.9379	21.006	-2.234	0.025	-88.109	-
5.767						
volume	1546.8121	631.366	2.450	0.014	309.358	2784.
surface_area:volume	-9.8954	8.687	-1.139	0.255	-26.922	7.
length:volume	-261.2940	111.087	-2.352	0.019	-479.021	-
43.567						
surface_area:length:volume	1.7092	1.107	1.544	0.123	-0.461	3.
depth:volume	-889.6532	336.033	-2.648	0.008	-1548.265	-
231.041						
surface_area:depth:volume	5.9795	4.900	1.220	0.222	-3.625	15.
length:depth:volume	147.1407	59.609	2.468	0.014	30.310	263.
surface_area:length:depth:volume	-0.9744	0.595	-1.639	0.101	-2.140	0.
width	1275.8378	730.172	1.747	0.081	-155.273	2706.
surface_area:width	120.3869	78.080	1.542	0.123	-32.646	273.
length:width	-207.1970	222.296	-0.932	0.351	-642.889	228.
surface_area:length:width	-20.3236	11.341	-1.792	0.073	-42.551	1.
depth:width	-939.3190	558.757	-1.681	0.093	-2034.462	155.
surface_area:depth:width	-62.5430	45.309	-1.380	0.167	-151.348	26.
length:depth:width	149.8735	142.585	1.051	0.293	-129.587	429.
surface_area:length:depth:width	10.5402	6.560	1.607	0.108	-2.317	23.
volume:width	-524.1973	218.599	-2.398	0.016	-952.644	-
95.750						
surface_area:volume:width	4.2683	2.836	1.505	0.132	-1.290	9.
length:volume:width	90.9437	39.394	2.309	0.021	13.733	168.
surface_area:length:volume:width	-0.7888	0.346	-2.282	0.022	-1.466	-
0.111						
depth:volume:width	305.9171	118.359	2.585	0.010	73.937	537.
surface_area:depth:volume:width	-2.6547	1.718	-1.545	0.122	-6.022	0.
length:depth:volume:width	-52.0842	21.561	-2.416	0.016	-94.344	-
9.825						
surface_area:length:depth:volume:width	0.4701	0.218	2.156	0.031	0.043	0.

(-0.5, 1.5)



2.5 Regression for showing 3D usefulness