

# Report Example

Insert Author Name here

25/09/2019

## 1 Introduction

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## 2 Data

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===== This is what some of the data looks like.It is a dataset on diabetes. The data originated from a LARS Paper.

There are 442 instances with 10 baseline variables. The response of interest is a quantitative measure of disease progression one year after baseline.

Each of these 10 feature variables have been mean centered and scaled by the standard deviation times n\_samples (i.e. the sum of squares of each column totals 1).

$$\frac{x - \mu}{\sigma}$$

	age	sex	bmi	bp	s1	s2	s3	s4	s5	s6
count	442.00	442.00	442.00	442.00	442.00	442.00	442.00	442.00	442.00	442.00
mean	-0.00	0.00	-0.00	0.00	-0.00	0.00	-0.00	0.00	-0.00	-0.00
std	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
min	-0.11	-0.04	-0.09	-0.11	-0.13	-0.12	-0.10	-0.08	-0.13	-0.14
25%	-0.04	-0.04	-0.03	-0.04	-0.03	-0.03	-0.04	-0.04	-0.03	-0.03
50%	0.01	-0.04	-0.01	-0.01	-0.00	-0.00	-0.01	-0.00	-0.00	-0.00
75%	0.04	0.05	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03
max	0.11	0.05	0.17	0.13	0.15	0.20	0.18	0.19	0.13	0.14

Descriptive table of diabetes data.

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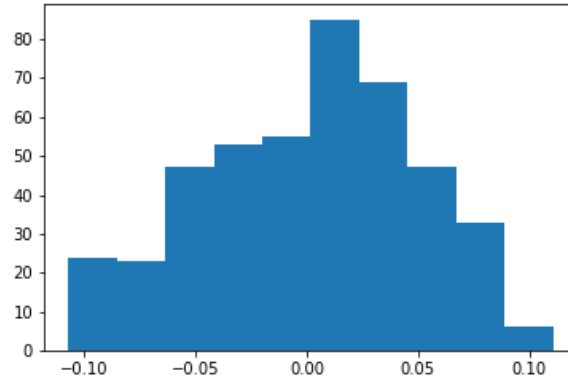


Figure 1: This image was saved directly to the current folder.

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## 2.1 By the Way

If you would like to merge multiple dataframes together, you can just pass them in as a list of tables to be added. The output will be something like:

	s1	s3	s5
count	442.00	442.00	442.00
mean	-0.00	-0.00	-0.00
std	0.05	0.05	0.05
min	-0.13	-0.10	-0.13
25%	-0.03	-0.04	-0.03
50%	-0.00	-0.01	-0.00
75%	0.03	0.03	0.03
max	0.15	0.18	0.13

Merged dataframes example. »»»> master

## 2.2 Linear Regression

We can perform a simple linear regression with one of the variables against the response factor. Here we use sklearn's LinearRegression model. The variable we are using is the age.

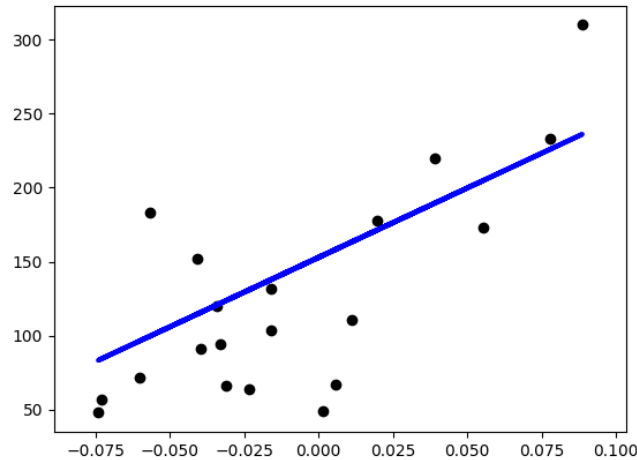


Figure 2: This is a plot of the linear reg output. This plot was saved to a random directory and copied to the 'figures' folder of this report.

	Results	Values
0	Coefficient(s)	938
1	Mean Squared Error	2548
2	Variance Score	0

Results of the Logisitic Regression

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### 3 Conclusion

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===== **That's all, folks!**

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	Results	Values
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Results of the Logistic Regression

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std	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
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75%	0.04	0.05	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03
max	0.11	0.05	0.17	0.13	0.15	0.20	0.18	0.19	0.13	0.14

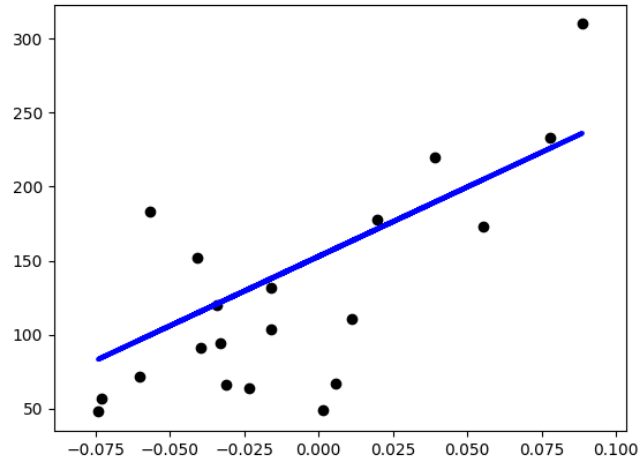


Figure 3: This is a plot of the linear reg output.

Descriptive table of diabetes data.

	s1	s3	s5
count	442.00	442.00	442.00
mean	-0.00	-0.00	-0.00
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75%	0.03	0.03	0.03
max	0.15	0.18	0.13

Merged dataframes example.

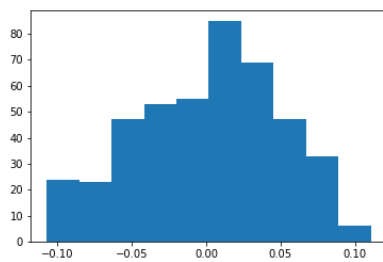


Figure 4: This is a histogram of the patients' age.

## 4 Appendix - Mapping Tables

### 4.1 Age Filter.csv

Lower	Upper	Category
1	11	1-11
12	17	12-17
18	34	18-34
35	49	35-49
50	10000	50+

### 4.2 Race Filter.csv

Original	Category
AA	['Asian', 'asian', 'Indian', 'Korean', 'Chinese', 'Asian american', 'Vietnamese', 'asian indian', 'american indian', 'east indian', 'indian', 'middle eastern american', 'american indian', 'asian']
MR	['Multiracial:Other Combination', 'MultiRacial', 'Biracial', 'Multiracial:Black-African American White', 'Other Multi-Race', 'Multi-Race', 'Multiracial:Asian/Black-African American', 'Multiracial:Asian/White', 'Multi Raci', 'More Than One Race', 'Asian and White', 'biracial', 'multiracial:Other Combination', 'Multiracial', 'Mixed', 'Biracial-White/Native American', 'MultiRacia', 'White/Black', 'multiracial', 'biracial', 'multiracial:asian/black-african american', 'multiracial', 'multiracial:asian/white', 'multiracial:other combination', 'mixed', 'multi raci', 'multiracial:black-african american white', 'multi-race']
NHPI	['PACIFIC ISLANDER', 'NativeHawaiianPacificIslander', 'Hawaiian / Pacific Islander', 'Native Hawaiian/Other Pacific Islander', 'Native Hawaiian or Other Pacific Islander', 'Hawaiian or other Pacific Islander', 'Hawaiian/P', 'Hawaiian/Pacific Islander', 'Native Hawaiian/Pacific Is', 'Pacific Islander', 'hawaiian / Pacific Islander', 'Native Hawaiian or Other Pacific Is', 'pacific islander', 'nativehawaiian-pacificislander', 'native hawaiian/other pacific islander', 'hawaiian/p', 'hawaiian / pacific islander', 'native hawaiian/pacific is']

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