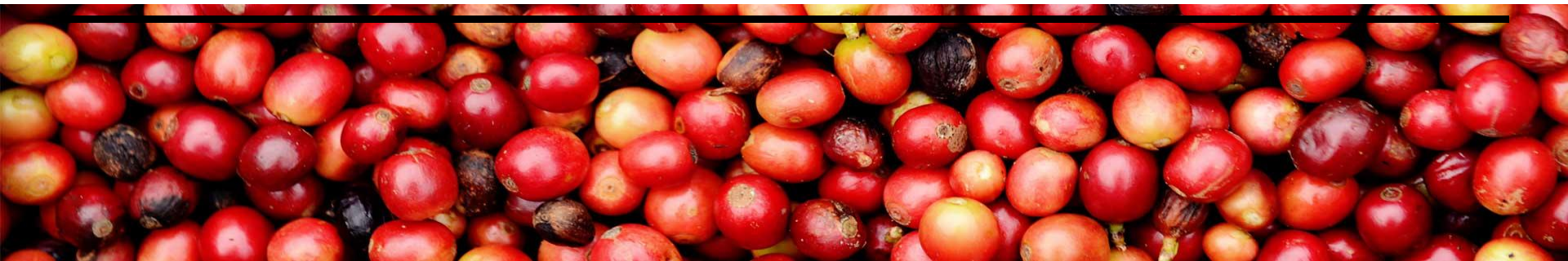




COFFEE, ANYONE?...

Mónica Ramírez Bernal

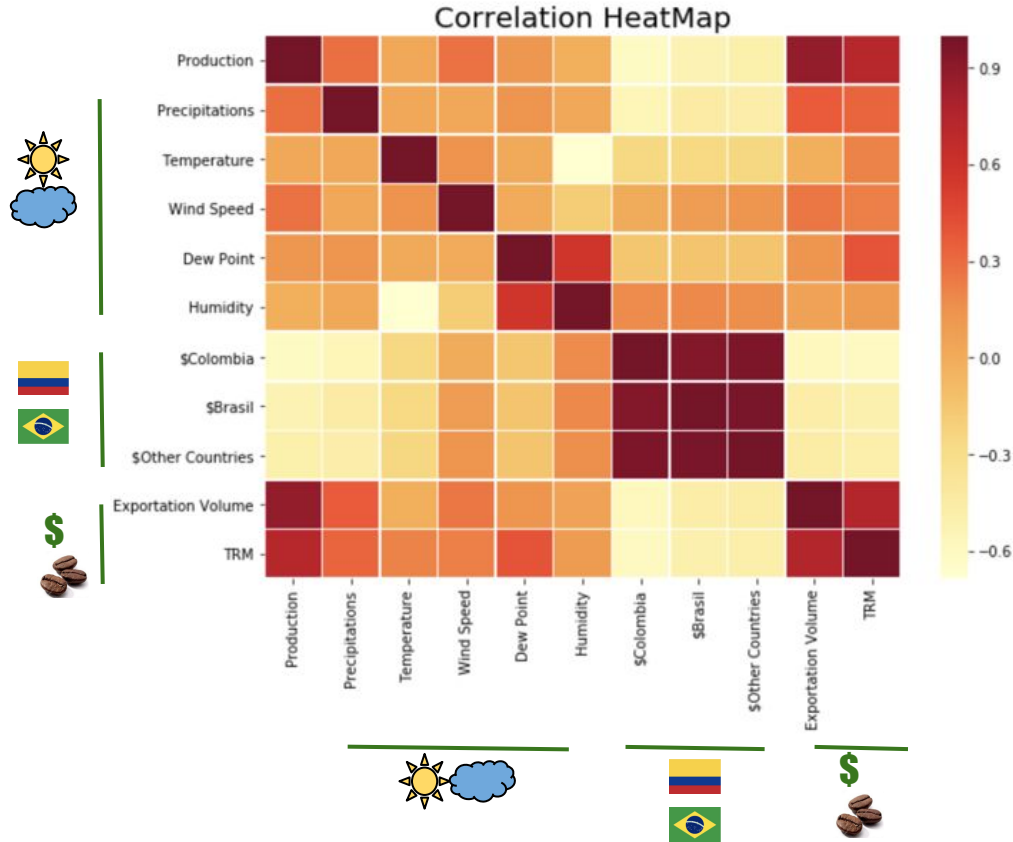


CONTEXT



- *2nd Coffee Producer in the world*
- *3% total area = 10% World's Coffee!*
- *Coffee only grows in particular weather and time (May-Oct)*
- *Colombia uses a currency different from dollar (TRM)*

SO, WHAT MAKES COFFEE GROW?





WEATHER ANALYSIS

Precipitations

Temperature

Wind Speed

Humidity

Dew Point

R2 = 0.27

Adj R2 = 0.20

Skew = 0.72

P-Values [0.039 - 0.745]

R2-test = 0.148

Add:

Harvest Month

R2 = 0.50

Adj R2 = 0.33

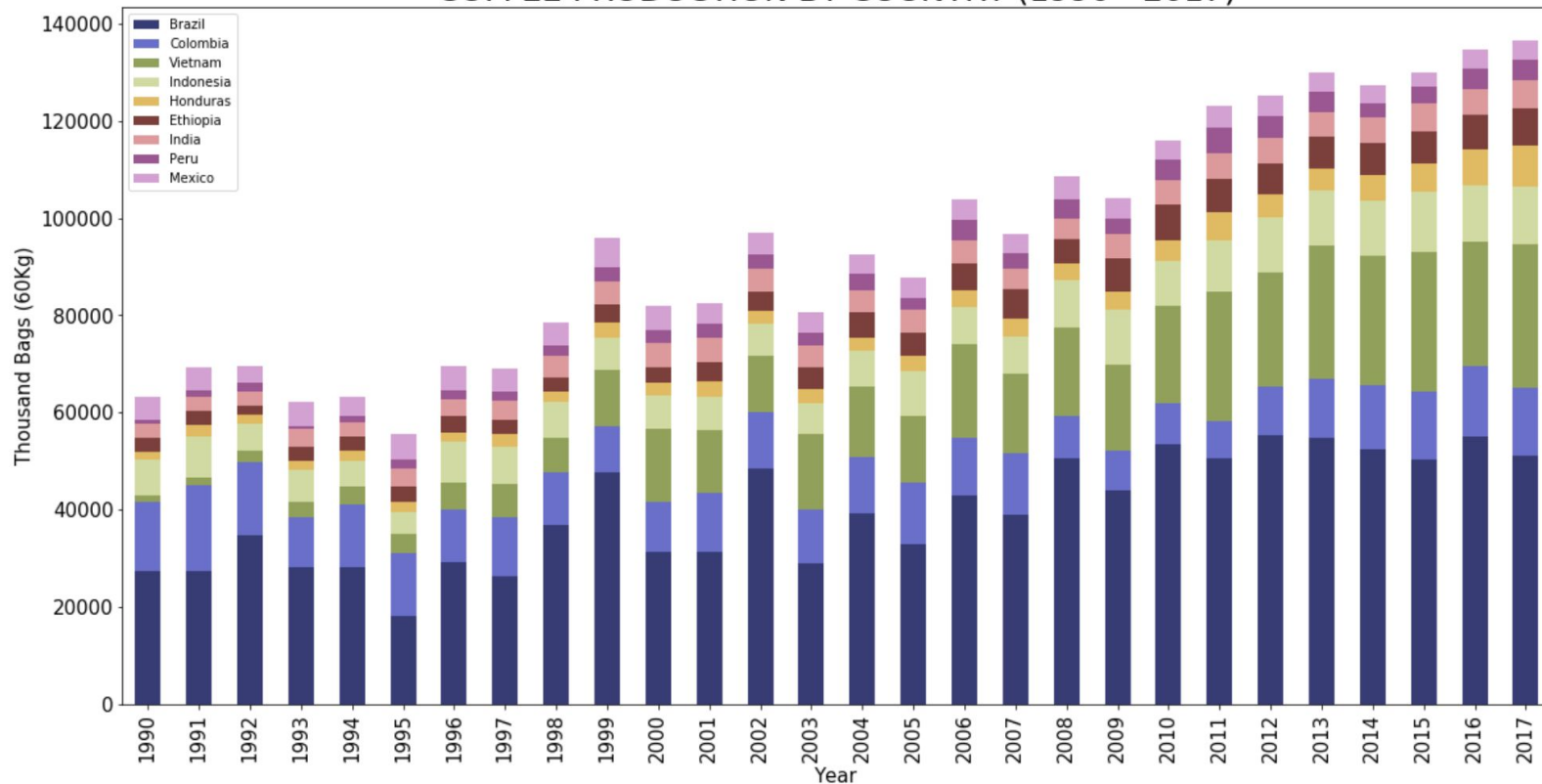
Skew = 0.49

P-Values [0.002 - 0.759]

R2-test = 0.634

WOULD YOU LIKE ANOTHER KIND?

COFFEE PRODUCTION BY COUNTRY (1990 - 2017)



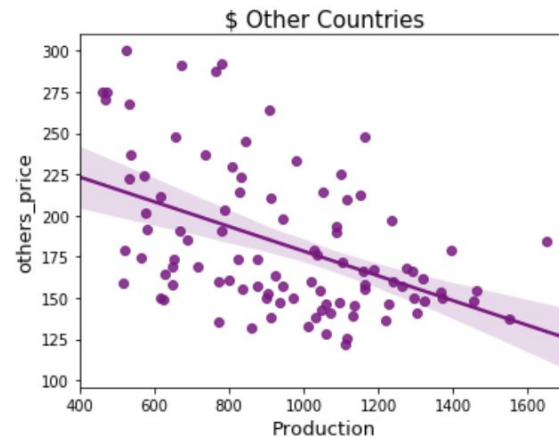
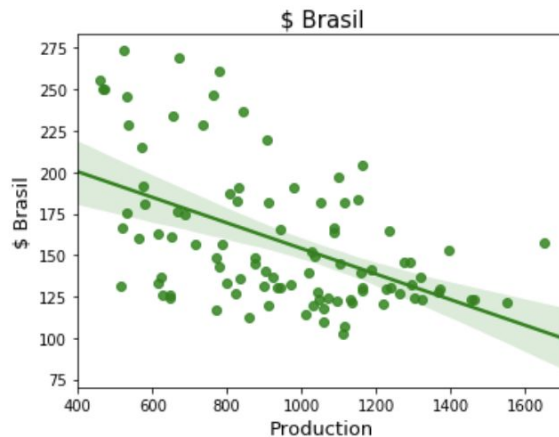
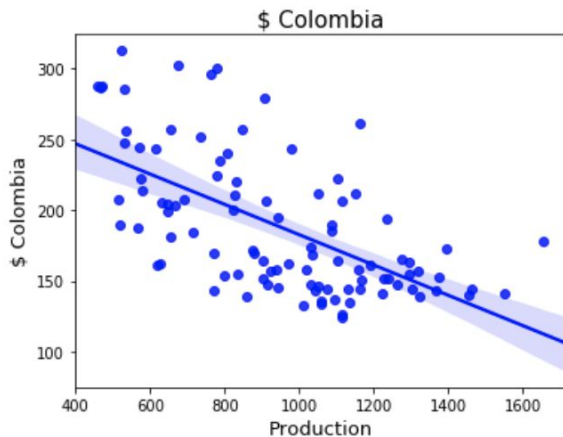
COUNTRY ANALYSIS

Production

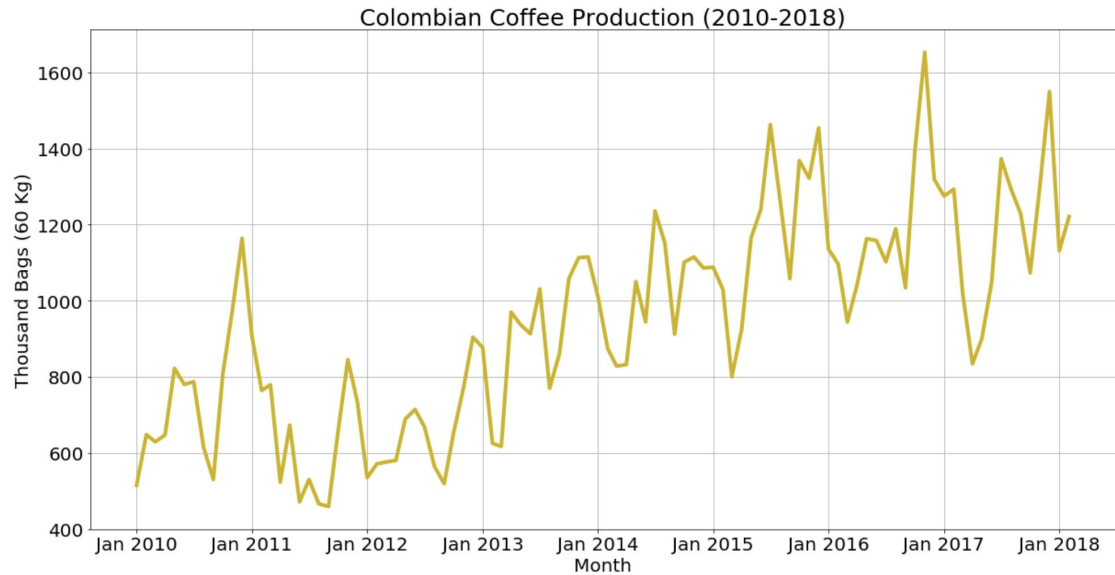
$R^2 = 0.94$
 $Adj\ R^2 = 0.93$
 $Skew = -0.79$
 $P\text{-Values} [0.011 - 0.553]$
 $R^2\text{-test} = 0.71$

Coffee Price

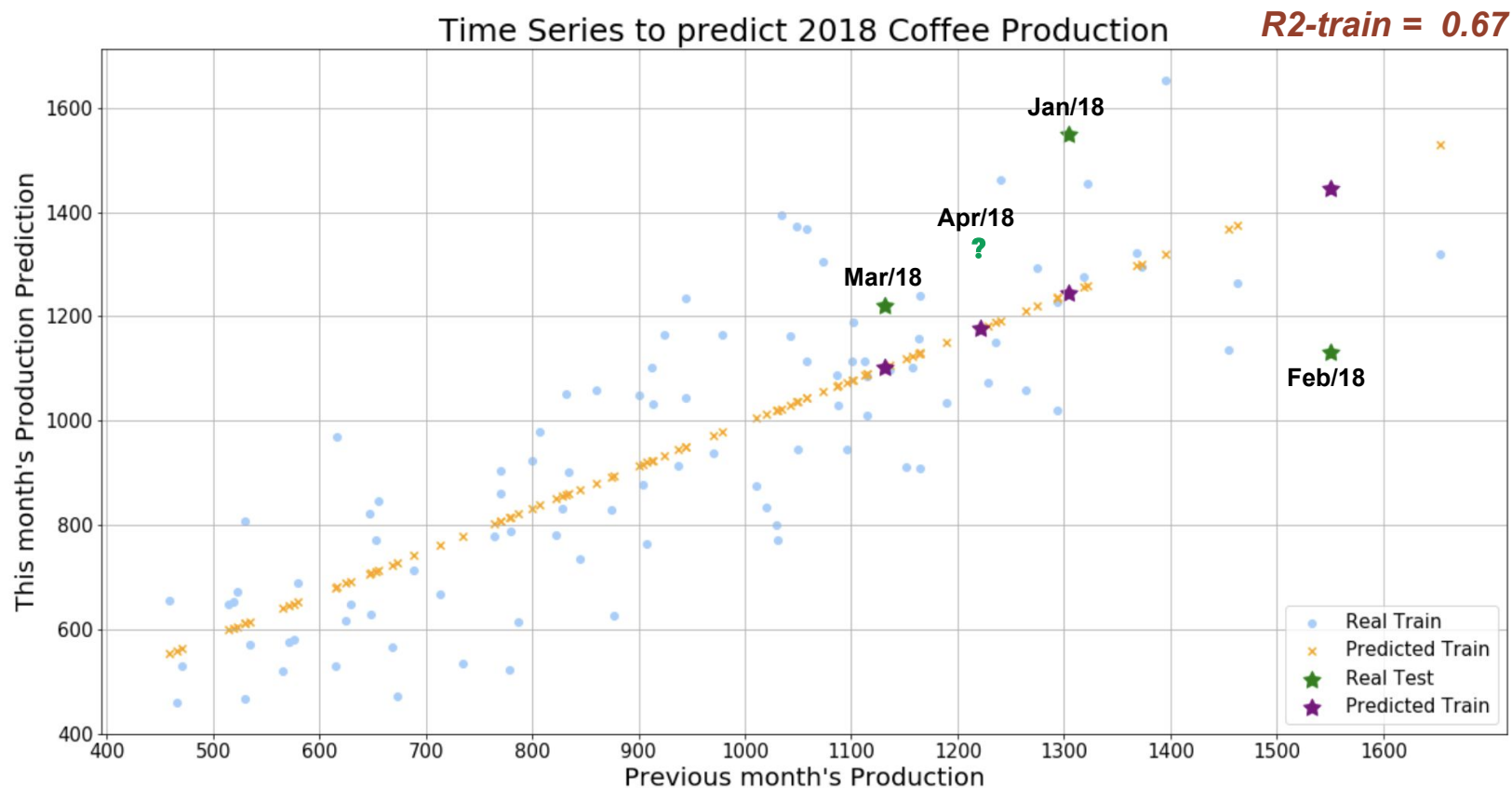
$R^2 = 0.824$
 $Adj\ R^2 = 0.810$
 $Skew = -0.018$
 $P\text{-Values} [0.001 - 0.749]$
 $R^2\text{-test} = 0.703$



TIME FOR A COFFEE

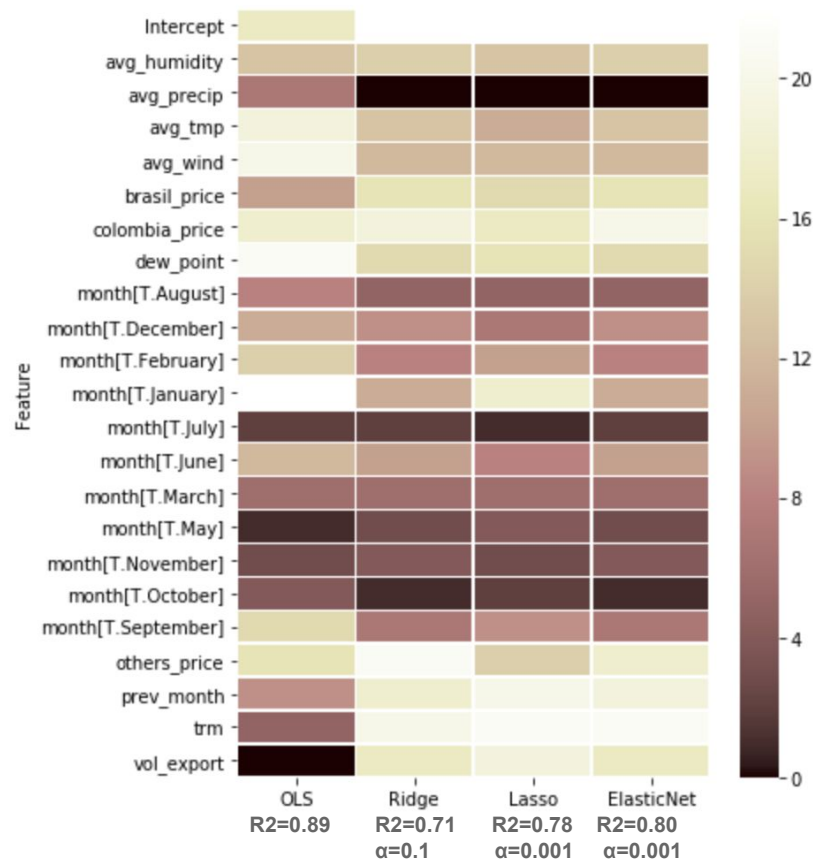


TIME SERIES



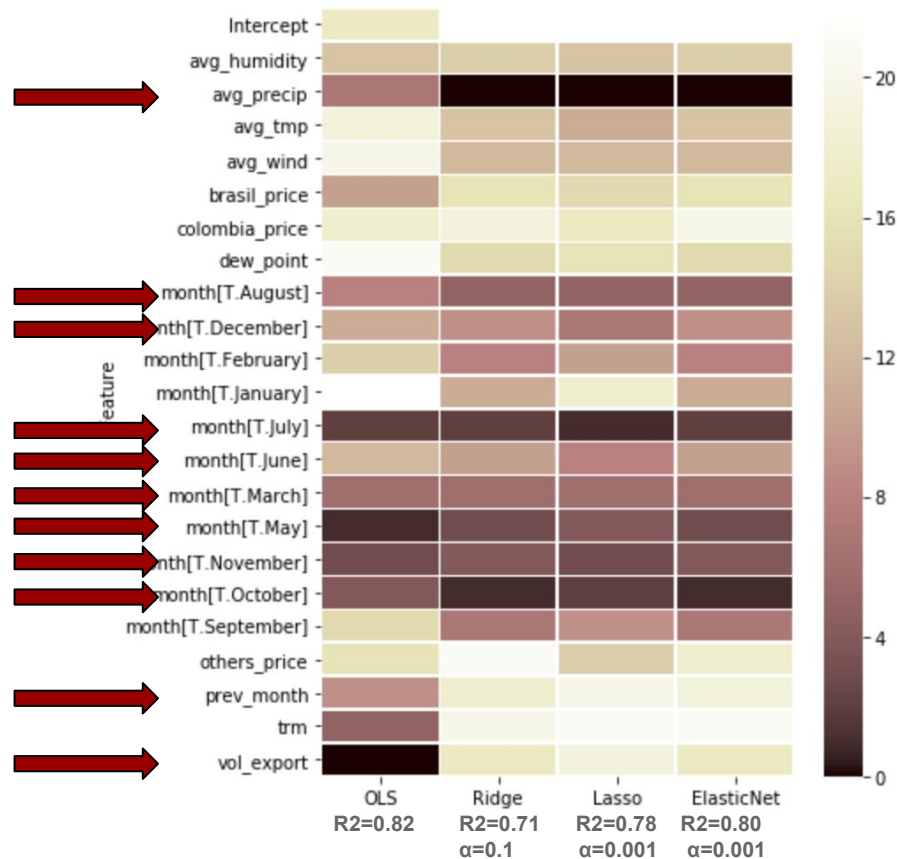


LET'S ALL GET A COFFEE





LET'S ALL GET A COFFEE





YES! MORE COFFEE!!!

R2 = 0.885

Adj R2 = 0.864

Skew = -0.15

R2-test = 0.783

	coef	std err	t	P> t
avg_precip	-378.4855	258.340	-1.465	0.148
month[T.August]	-1.4343	43.652	-0.033	0.974
month[T.December]	27.2085	45.625	0.596	0.553
month[T.July]	179.7751	61.335	2.931	0.005
month[T.June]	111.0806	43.326	2.564	0.013
month[T.March]	-112.6883	54.096	-2.083	0.042
month[T.May]	107.0420	42.930	2.493	0.016
month[T.November]	96.2914	49.520	1.944	0.057
month[T.October]	113.2358	45.682	2.479	0.016
vol_export	1.1348	0.061	18.673	0.000
Intercept	-52.4104	54.933	-0.954	0.344



CONCLUSIONS

- *Rain seems to be the only weather significant factor*
- *Production might be affected by other features in common with other countries*
- ***Next Step: More Features***
- ***Next Step: Time Analysis on other features***

SOURCES

- *Weather Underground (www.wunderground.com)
Weather Data from Quindio, Caldas and Risaralda,
Colombia (Retrieved 18-04-2018)*
- *Colombian Coffee Growers Organization
(www.federaciondecafeteros.org) Coffee Information
and Photos (Retrieved 19-04-2018 - 26-06-2018)*
- *International Coffee Organization (www.ico.org)
Coffee Information (Retrieved 19-04-2018)*





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Blog: monitarb.github.io

Projects GitHub Repo:

https://github.com/monitarb/first_projects/tree/master/P2_ColombianCoffeePrediction

2018

