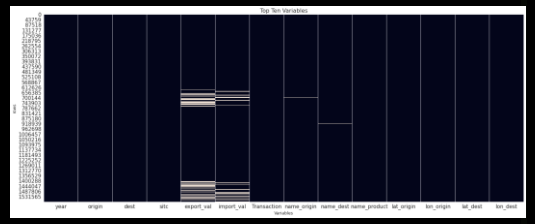
Comercio Internacional de Colombia

Exportaciones e importaciones de Colombia entre 1962 y 2017

Final Data Triathlon | Olimpiadas | Platzi | Diego Lesmes ~ Data Scientist

Ingeniería de datos

- Productos
- Grupos
- Exportaciones
- Países
- Importaciones

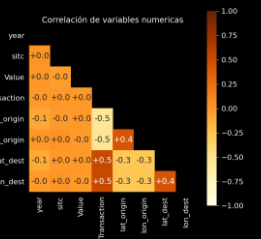


Ciencia de datos

Numerical data set for training

	year	sitc	Value	Transaction	lat_origin	lon_origin	lat_dest	lon_dest
778802	1962	712	0.0	1	2.889443	-73.783892	7.989737	-0.567946
778803	1962	1210	12000.0	1	2.889443	-73.783892	7.989737	-0.567946
778804	1962	2925	0.0	1	2.889443	-73.783892	-2.981434	23.822264
778805	1962	2925	0.0	1	2.889443	-73.783892	-0.726433	13.641915
778806	1962	1210	112000.0	1	2.889443	-73.783892	28.000027	2.999983
...	...	...	...	...	...	...	...	...
778896	2017	6635	26526.5	0	-32.875555	-56.020153	2.889443	-73.783892
778898	2017	8924	4285.5	0	-32.875555	-56.020153	2.889443	-73.783892
778899	2017	8928	25667.5	0	-32.875555	-56.020153	2.889443	-73.783892
778900	2017	8972	5306.0	0	-32.875555	-56.020153	2.889443	-73.783892
778901	2017	9310	10063063.0	0	-32.875555	-56.020153	2.889443	-73.783892

1430423 rows × 8 columns



	Variable	Autovalor	Participacion	Acumulado
0	year	2.846423e+21	1.000000e+02	100.0
1	sitc	7.943518e+12	2.790702e-07	100.0
2	Value	6.403370e+09	2.249620e-10	100.0
3	Transaction	3.520487e+09	1.236811e-10	100.0
4	lat_dest	5.603693e+08	1.968679e-11	100.0
5	lon_origin	4.639822e+08	1.630053e-11	100.0
6	lat_origin	2.598734e+08	9.129821e-12	100.0
7	lon_dest	1.583099e+05	5.561714e-15	100.0

Model

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Model: "sequential"
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Layer (type)                 Output Shape              Param #
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dense (Dense)                (None, 8)                 40
_________________________________________________________________
dense_1 (Dense)              (None, 4)                 36
_________________________________________________________________
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_________________________________________________________________
dense_3 (Dense)              (None, 1)                 3
=================================================================
Total params: 89
Trainable params: 89
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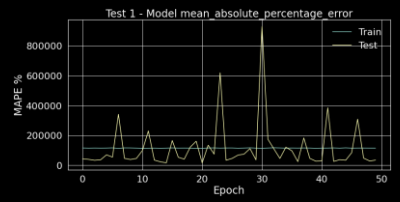
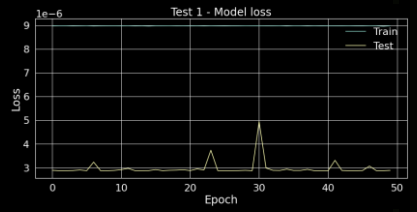
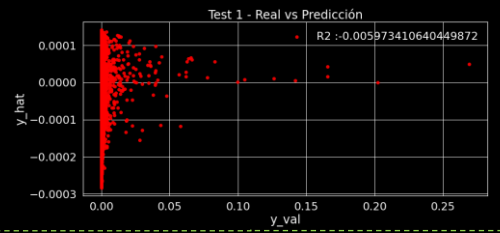
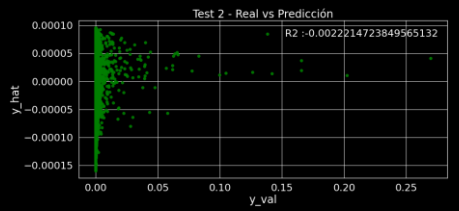
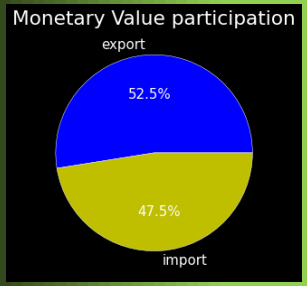


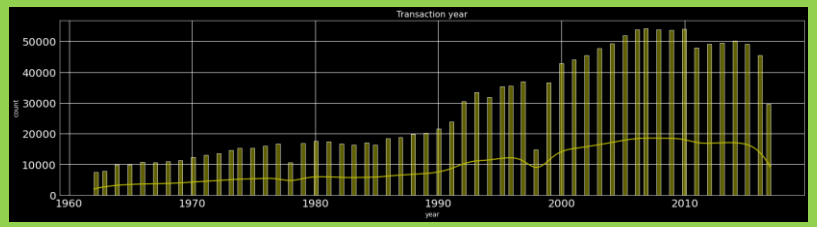


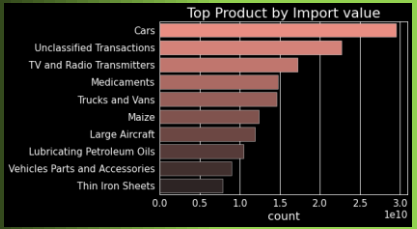


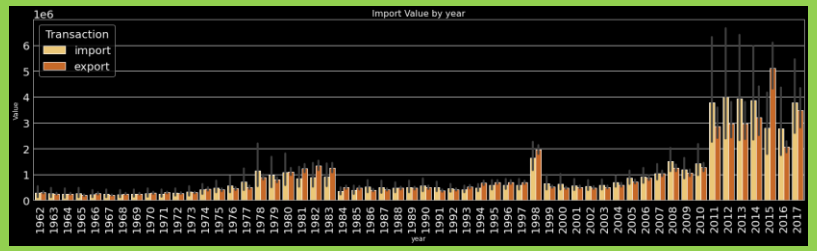


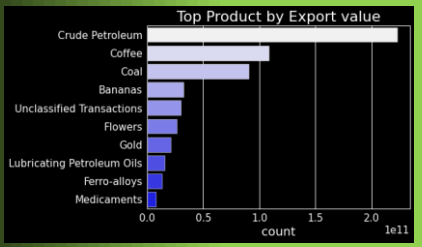
Análisis Exploratorio de datos

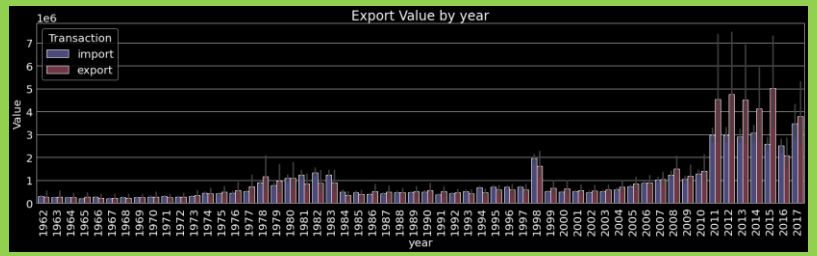


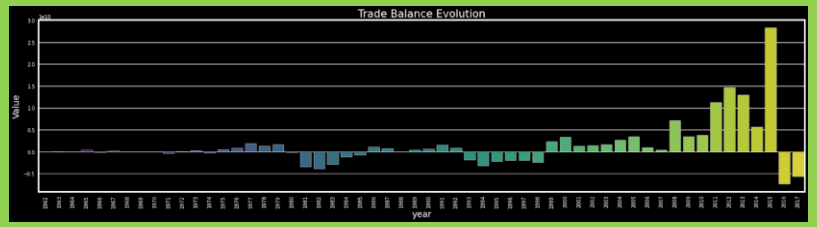


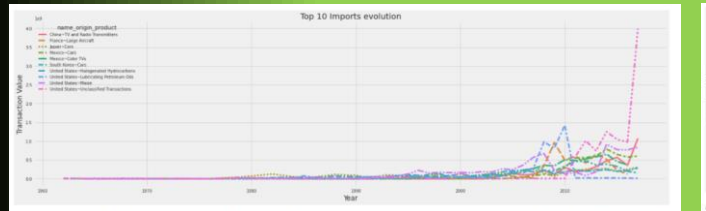




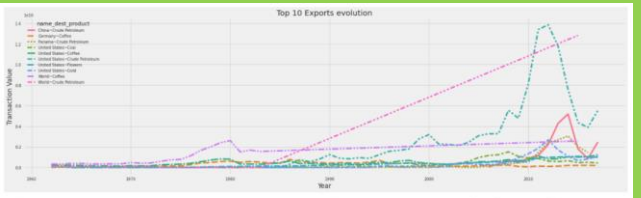








The Imports have been so different along the history, we have bought Lubricating Petroleum Oils to United States, Large Aircraft to France, Cars to Mexico and TV and Radio Transmitters to China



In this graphic we can see exactly historically which products we sell to which countries with the highest value transactions, the Crude Petroleum to USA and the world, and coffe to the world

In the last ten years we have Crude Petroleum sold to China and Panama and Gold to USA

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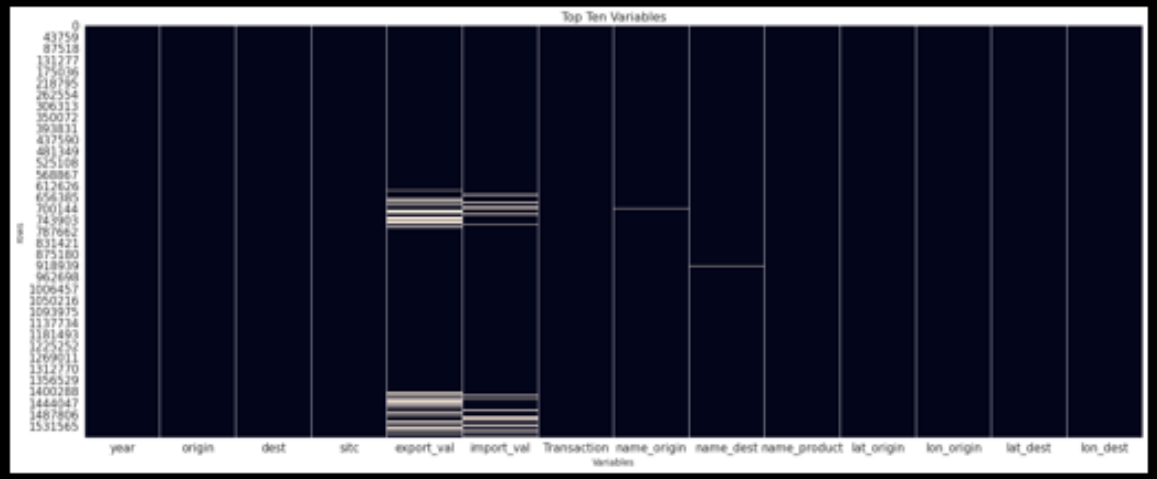

Ciencia de datos

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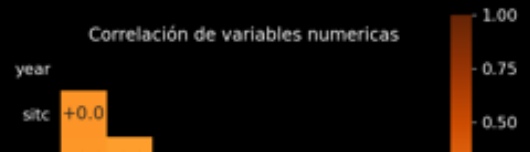
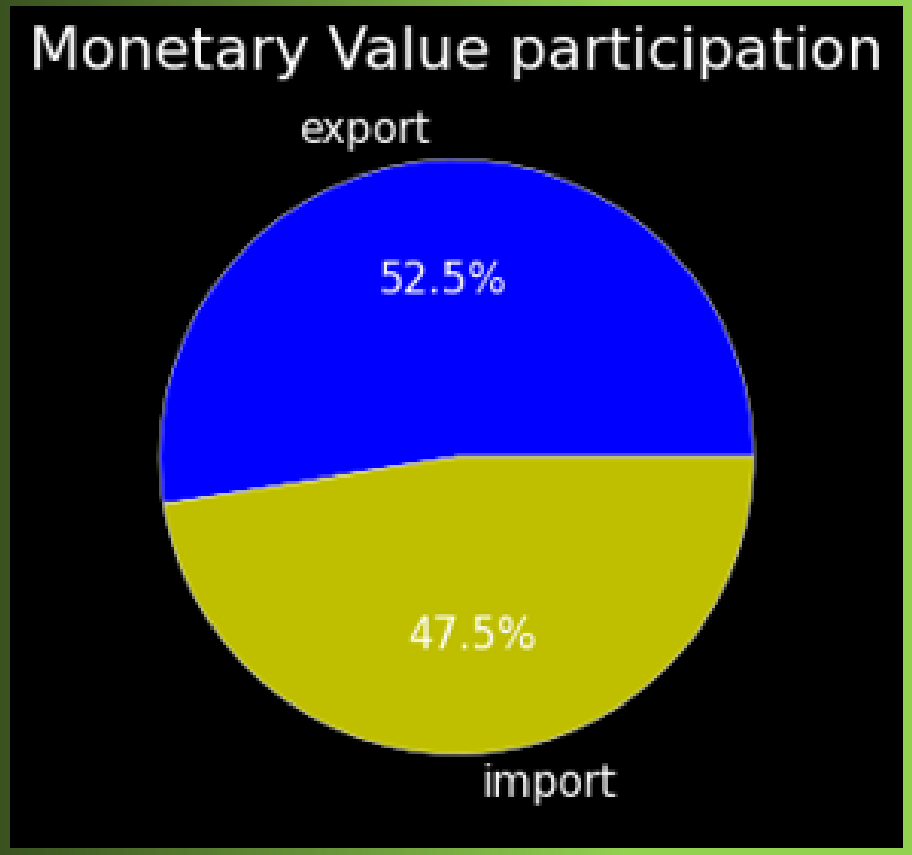
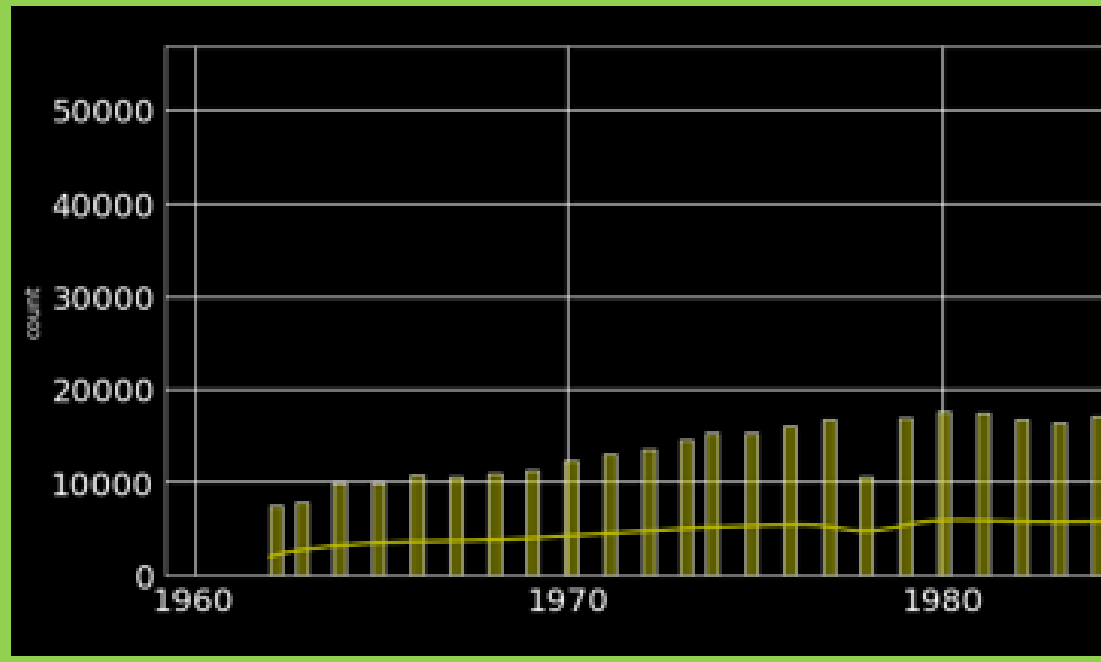
	year	sitc	Value	Transaction	lat_origin	lon_origin	lat_dest	lon_dest
775902	1962	712	0.0	1	2.889443	-73.783892	7.989737	-5.567946

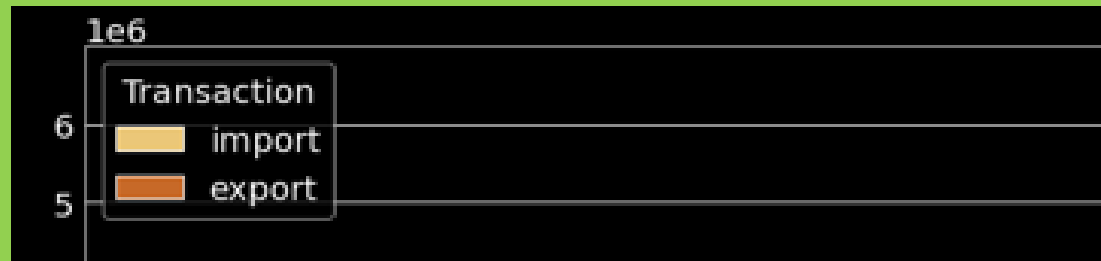


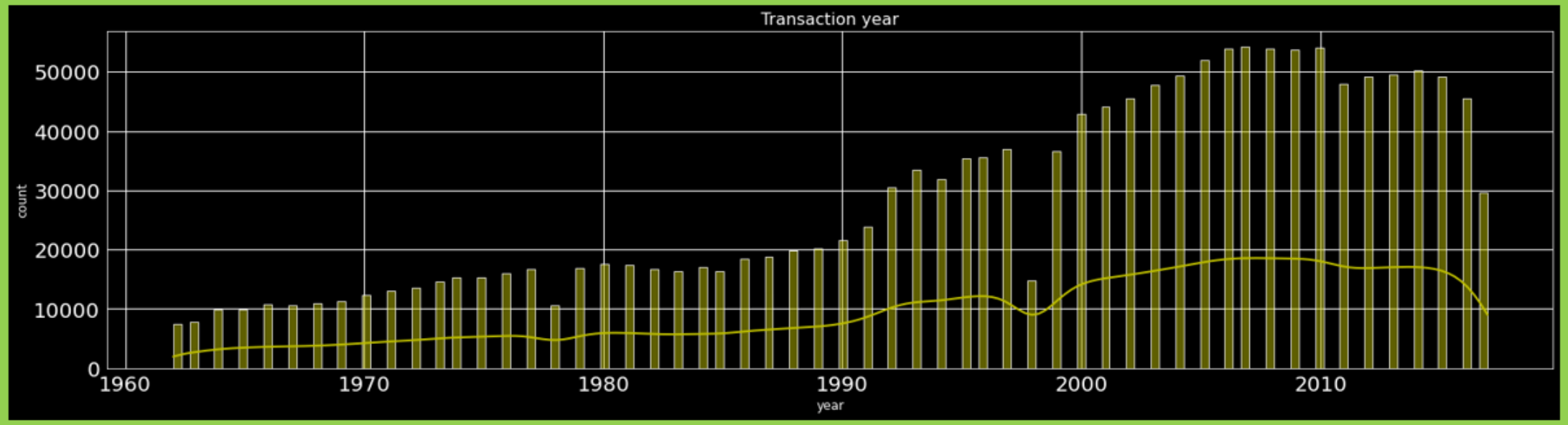
	Variable	Autovalor	Participacion	Acumulado
0	year	2.846423e+21	1.000000e+02	100.0

Análisis Exploratorio de datos








Transaction year
count
year
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20000
30000
40000
50000
1960
1970
1980
1990
2000
2010

rt value
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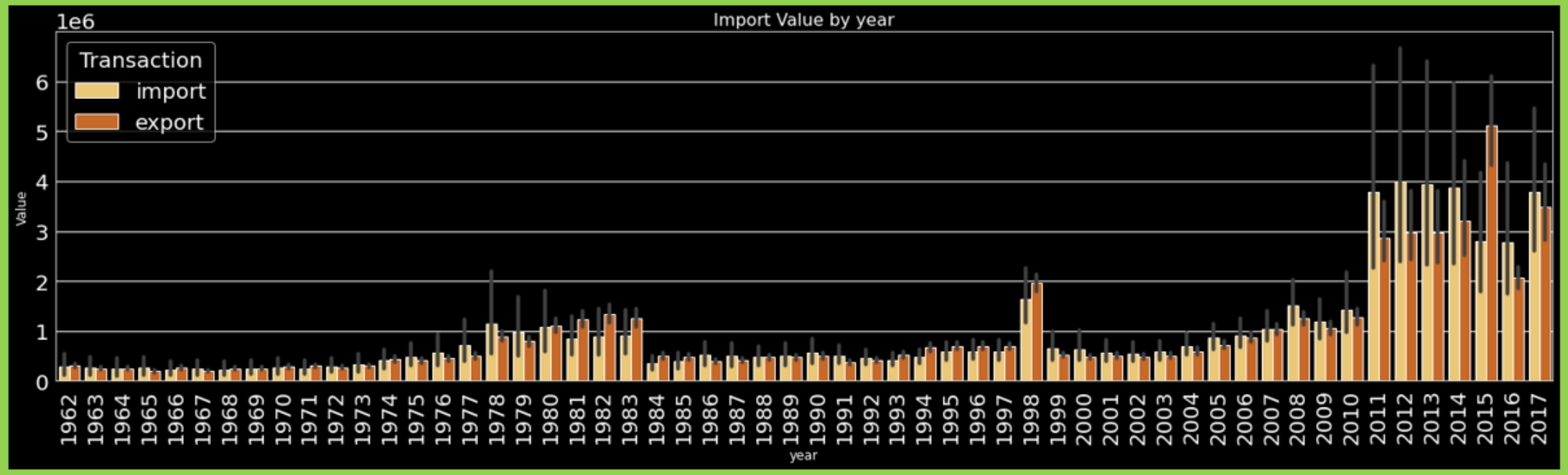
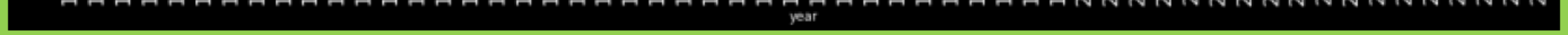
3.0
1e10


Import Value by year
1e6
Transaction
import
export
Value
year
0
1
2
3
4
5
6
1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

2.0
2.5
3.0
1e10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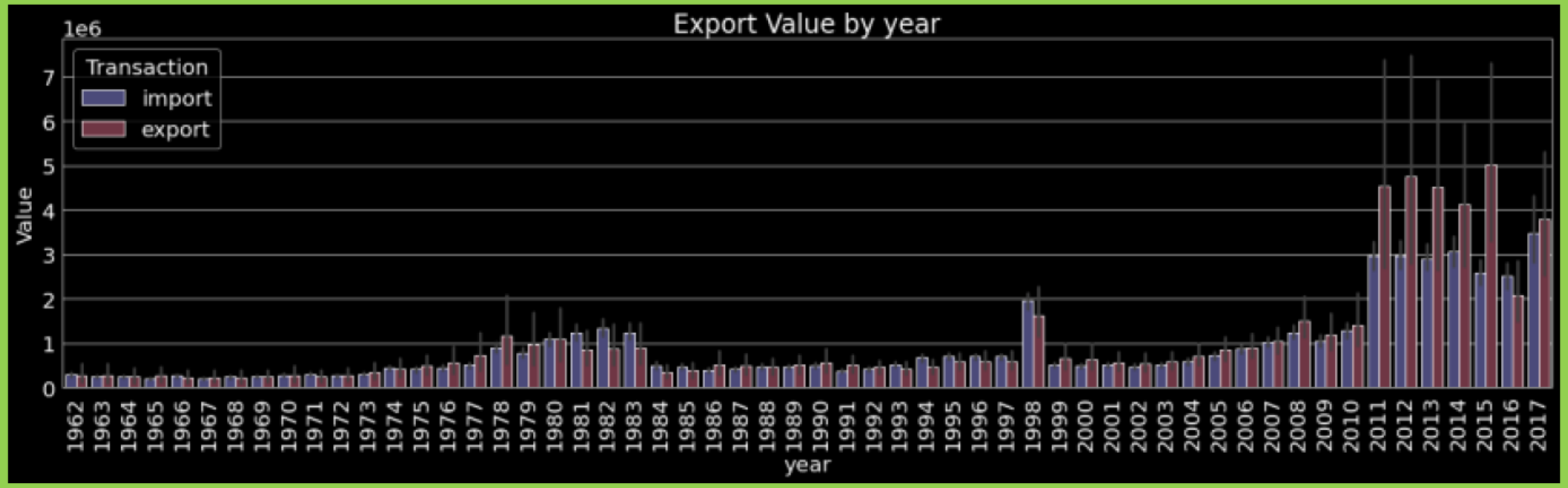
Export Value by year
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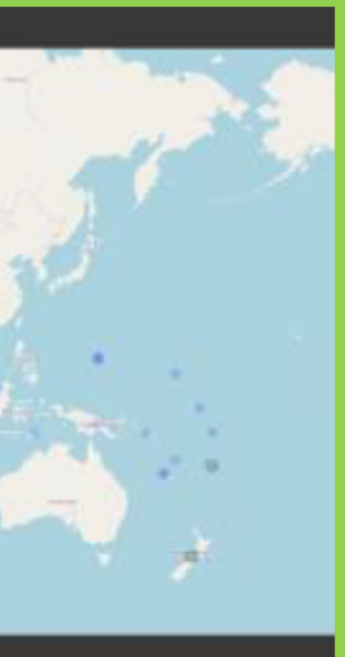
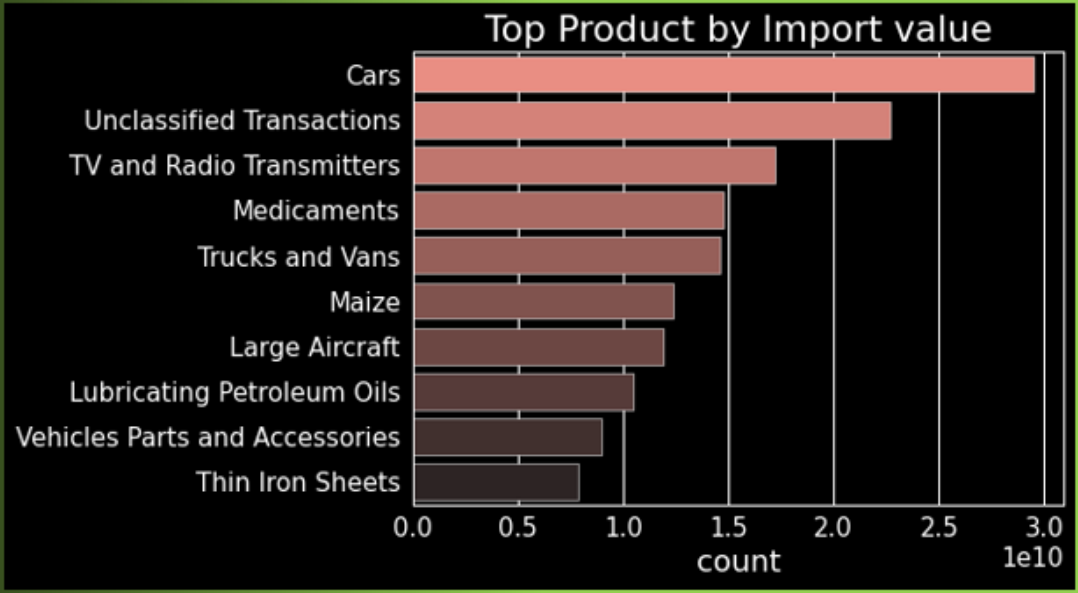
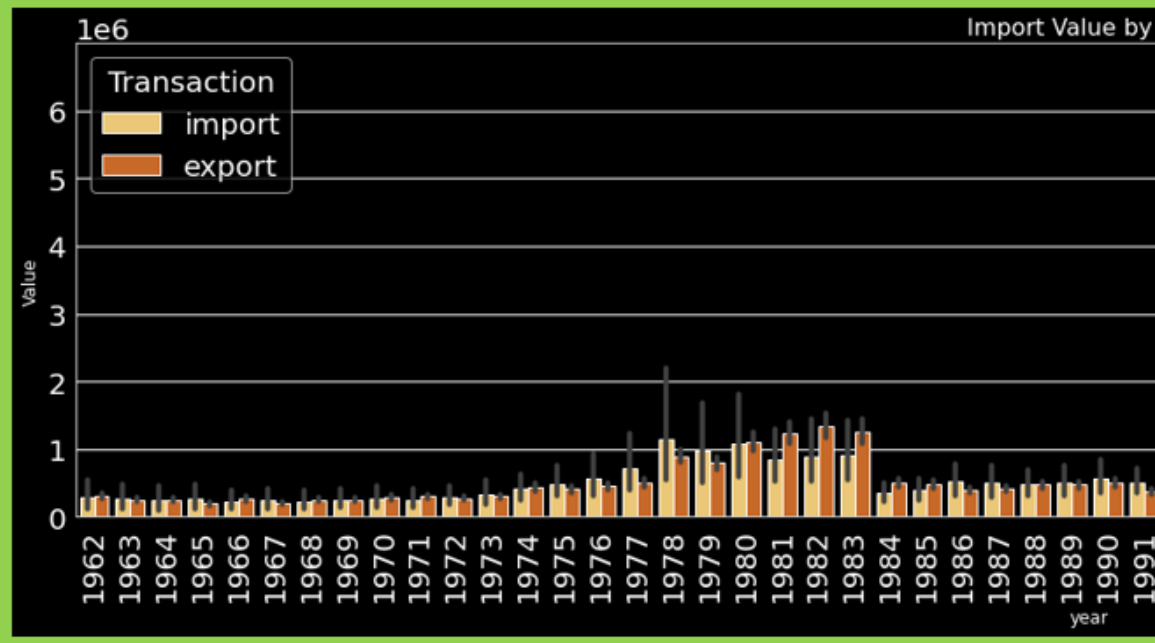
Transaction
import
export
Value
year

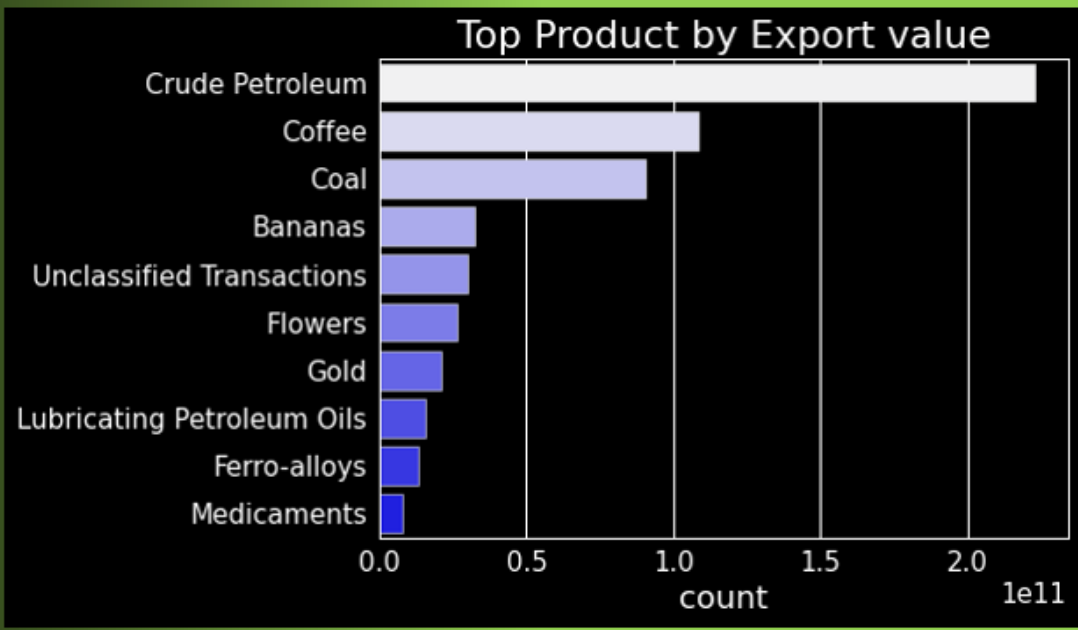


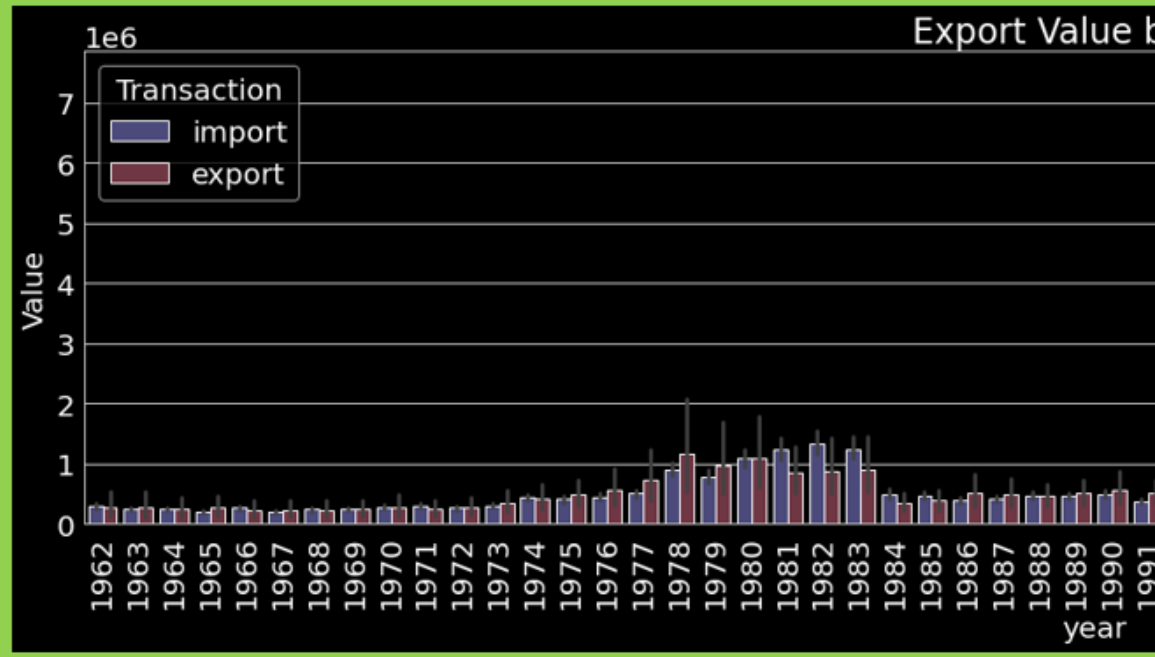
Trade Balance Evolution
1e10
Value
year

import









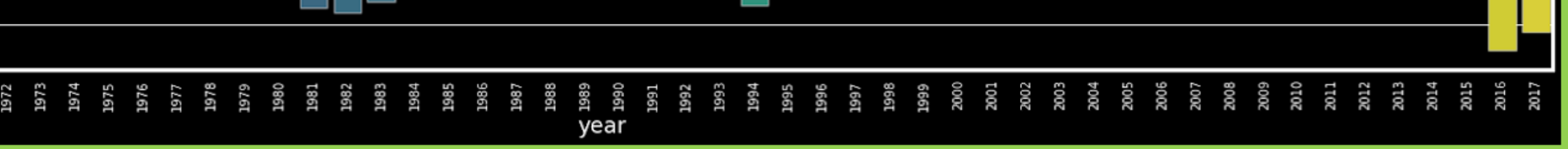
21st Century Import Origins

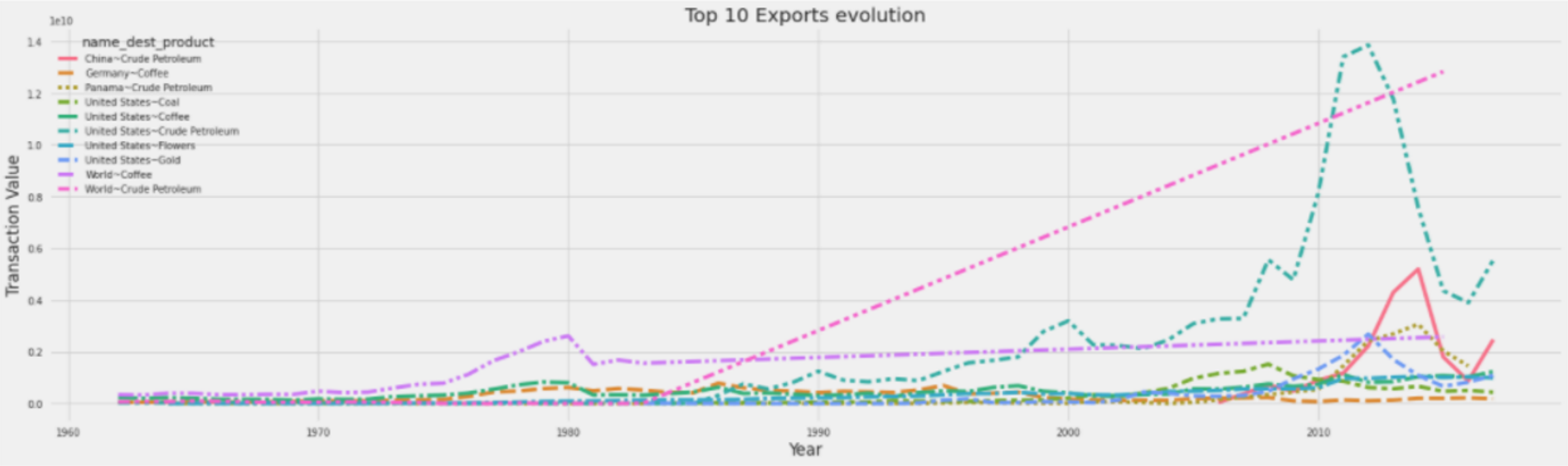
21st Century Import Origins

We can see where the imports comes from all around the world, as more red the point higher the value of the transactions

Top 10 Imports evolution

1e9





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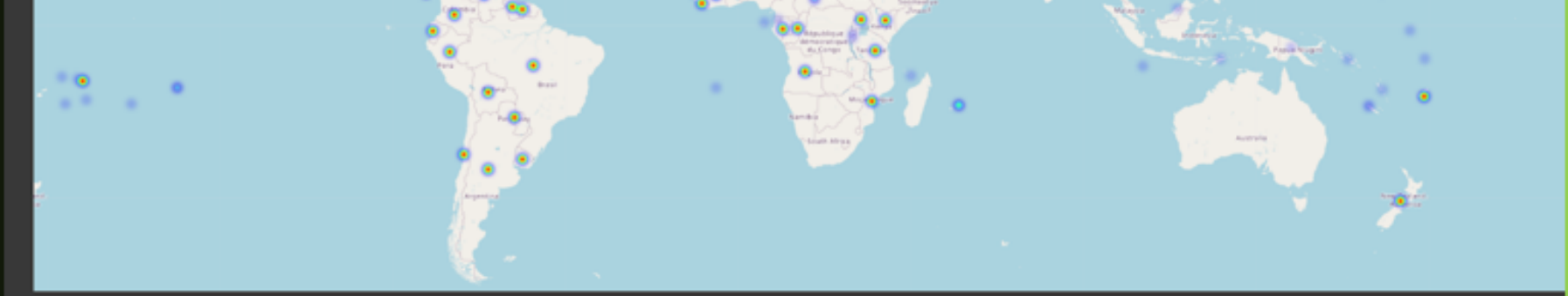

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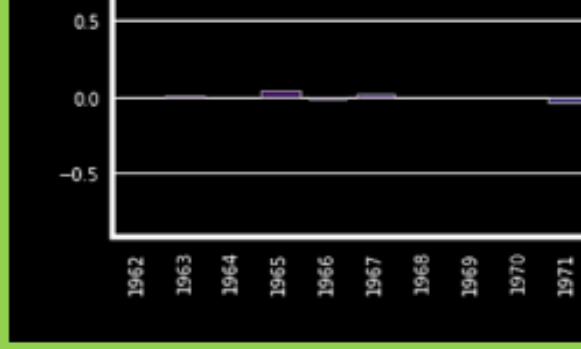

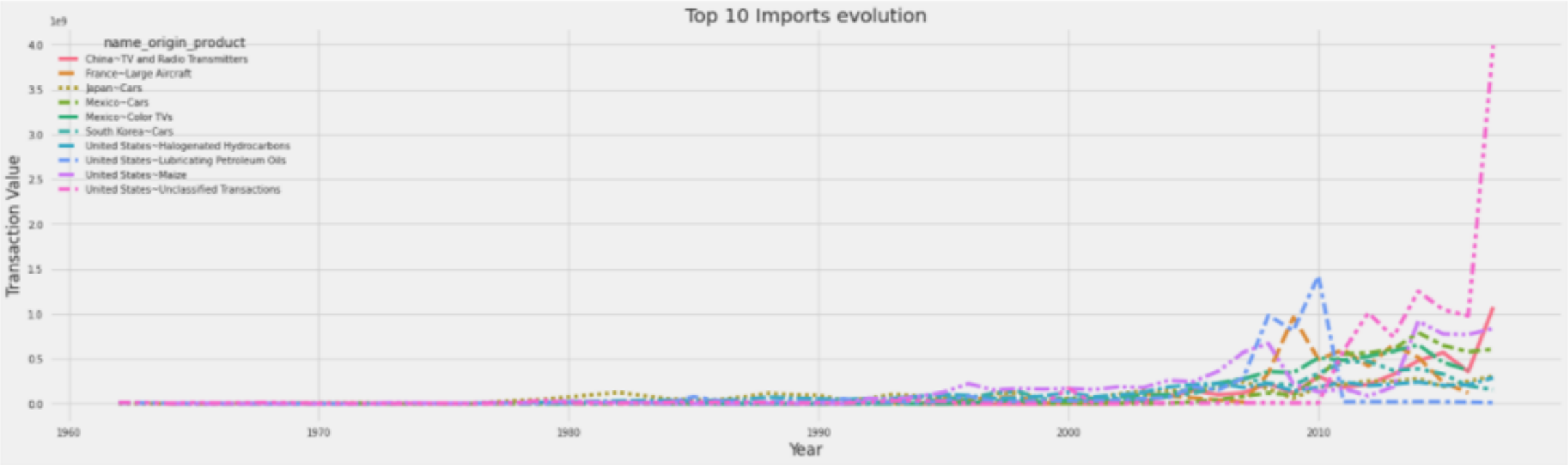

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775904	1962	2925	0.0	1	2.889443	-73.783892	-2.981434	23.822264
775905	1962	2925	0.0	1	2.889443	-73.783892	-0.726433	15.641915
775906	1962	1210	112000.0	1	2.889443	-73.783892	28.000027	2.999983
...	...	...	...	...	...	...	...	...
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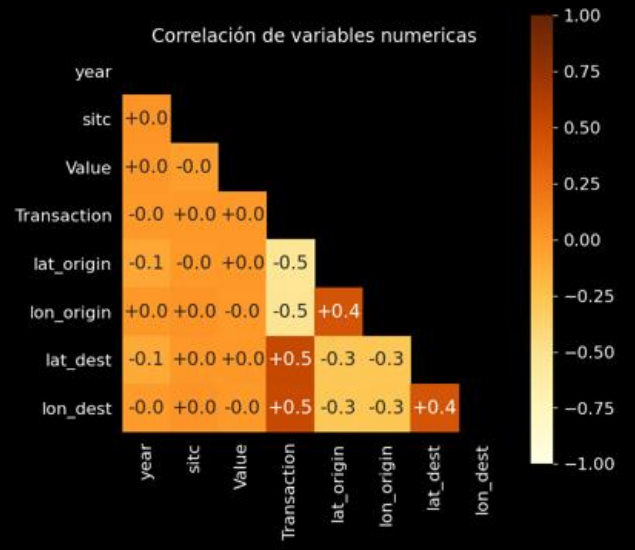
775900	2017	8972	5306.0	0	-32.875555	-56.020153	2.889443	-73.783892
775901	2017	9310	10063053.0	0	-32.875555	-56.020153	2.889443	-73.783892

1430423 rows x 8 columns



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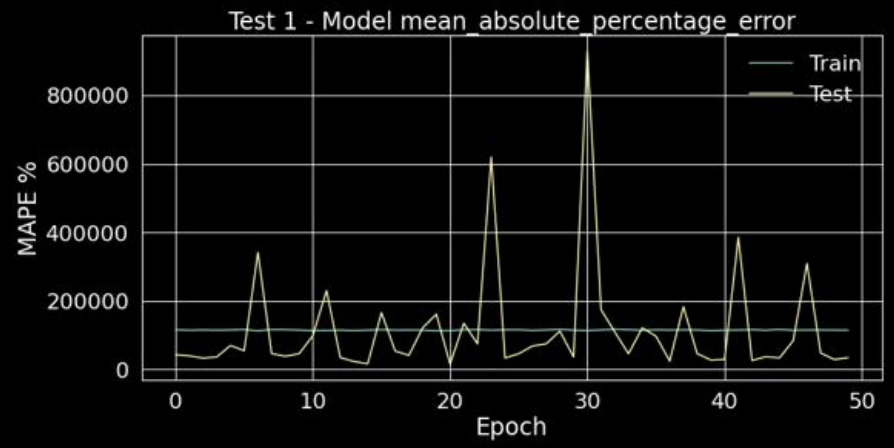
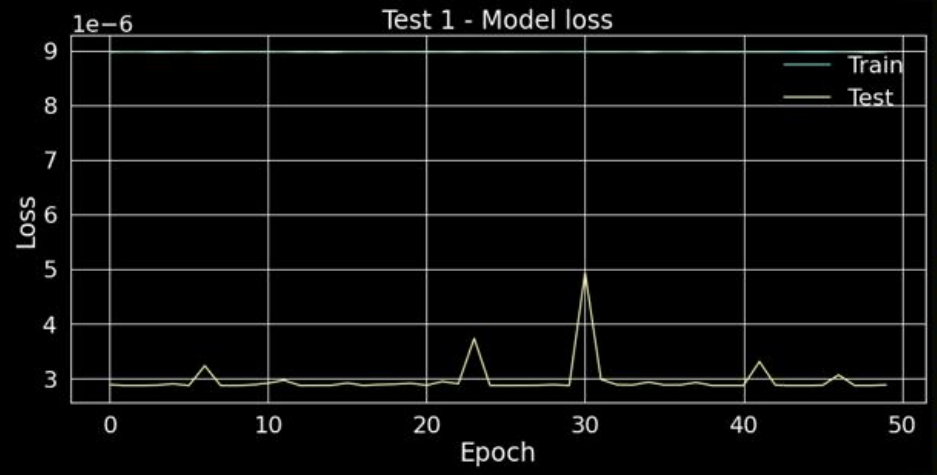
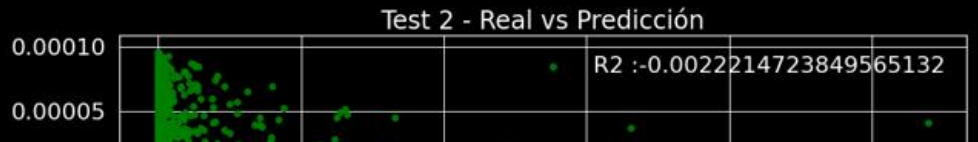
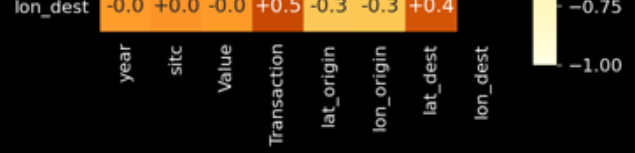
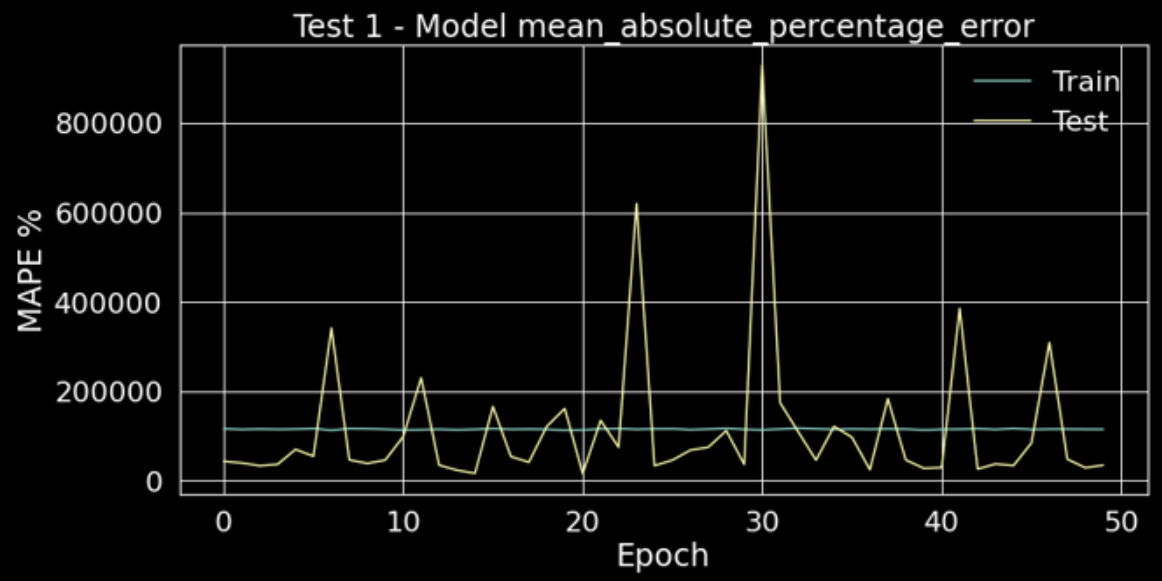


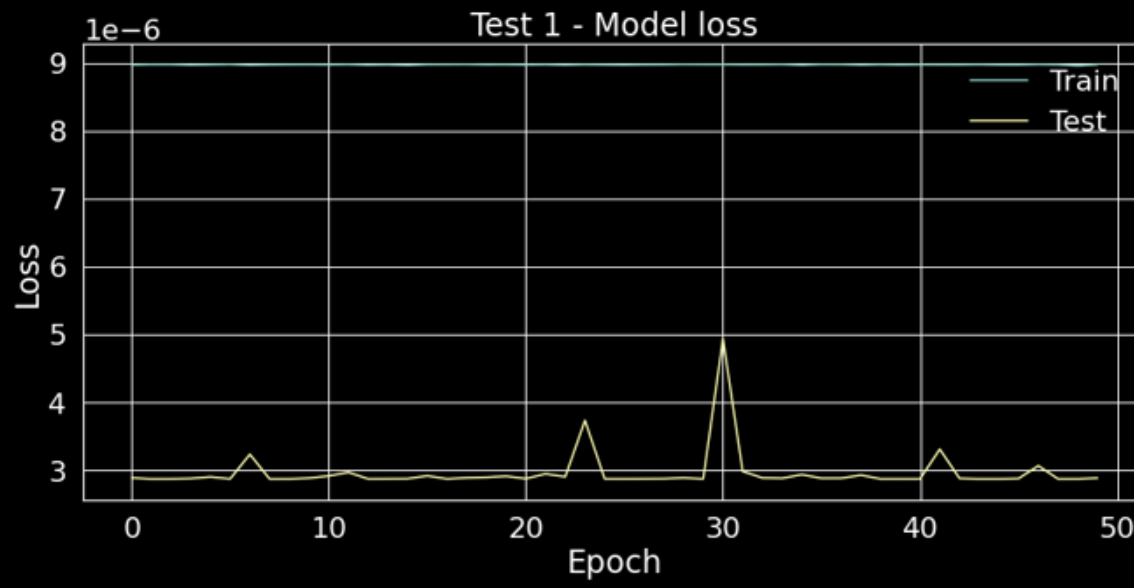


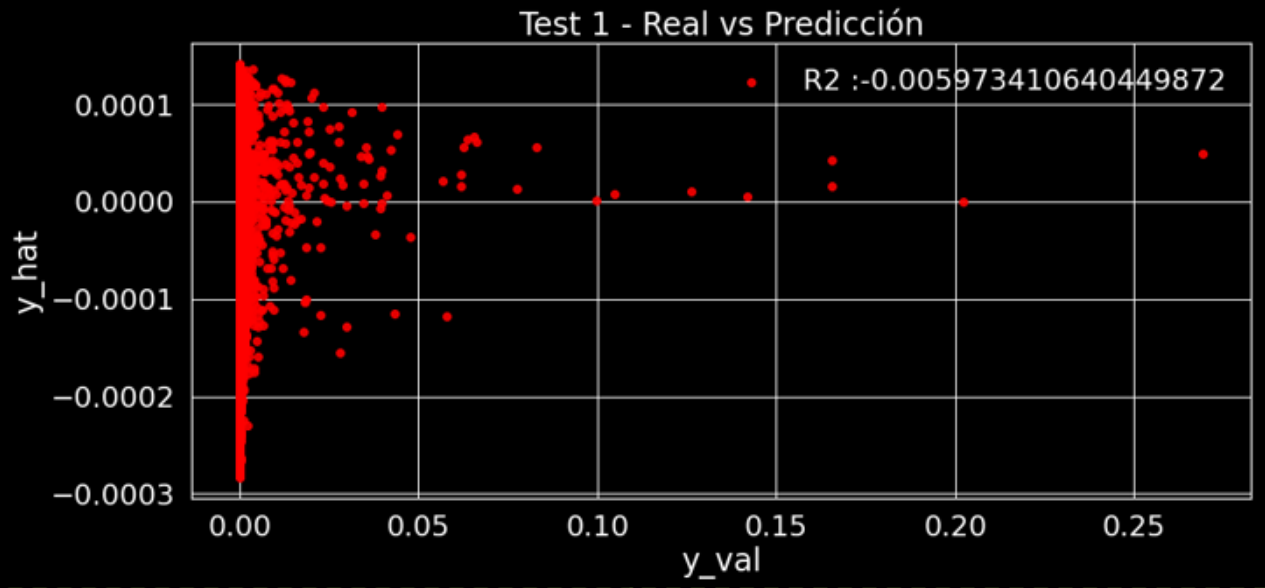


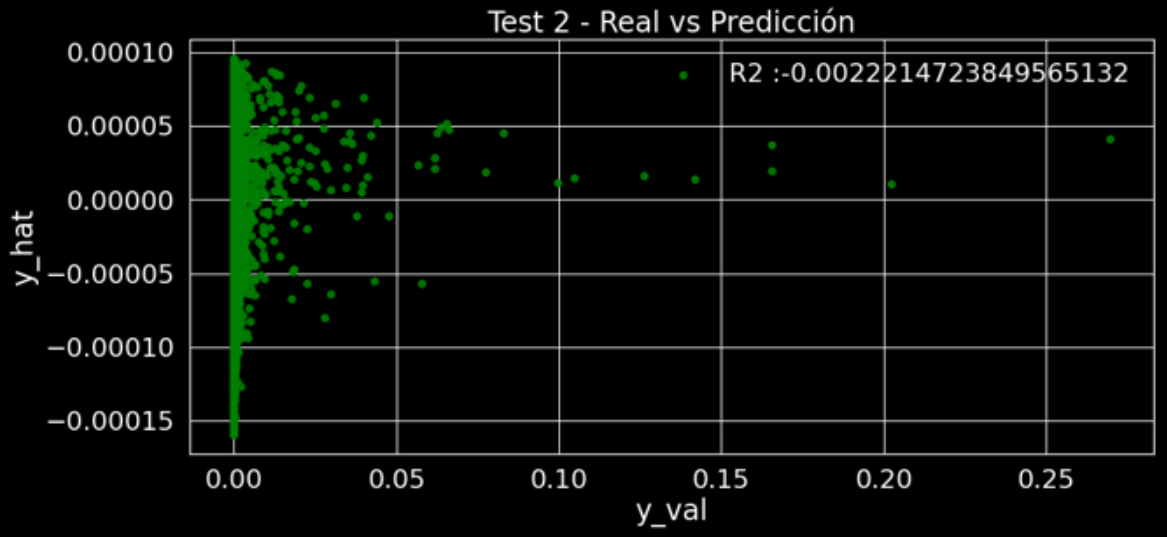


6	lat_origin	2.598734e+08	9.129821e-12	100.0
7	lon_dest	1.583099e+05	5.561714e-15	100.0









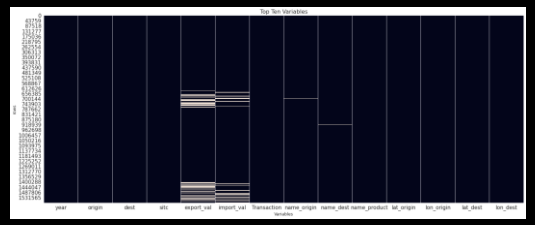
Comercio Internacional de Colombia

Exportaciones e importaciones de Colombia entre 1962 y 2017

Final Data Triathlon | Olimpiadas | Platzi | Diego Lesmes ~ Data Scientist

Ingeniería de datos

- Productos
- Grupos
- Exportaciones
- Países
- Importaciones

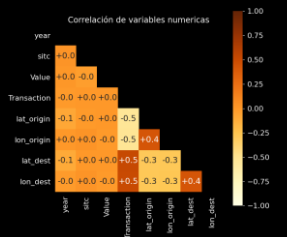


Ciencia de datos

Numerical data set for training

	year	sitc	Value	Transaction	lat_origin	lon_origin	lat_dest	lon_dest
778802	1962	712	0.0	1	2.889443	-73.783892	7.989737	-0.567946
778803	1962	1210	12000.0	1	2.889443	-73.783892	7.989737	-0.567946
778804	1962	2925	0.0	1	2.889443	-73.783892	-2.981434	23.822264
778805	1962	2925	0.0	1	2.889443	-73.783892	-0.726433	13.641915
778806	1962	1210	112000.0	1	2.889443	-73.783892	28.000027	2.999983
...	...	...	...	...	...	...	...	...
778896	2017	6635	26526.5	0	-32.875555	-56.020153	2.889443	-73.783892
778898	2017	8924	4285.5	0	-32.875555	-56.020153	2.889443	-73.783892
778899	2017	8928	25667.5	0	-32.875555	-56.020153	2.889443	-73.783892
778900	2017	8972	5306.0	0	-32.875555	-56.020153	2.889443	-73.783892
778901	2017	9310	10063063.0	0	-32.875555	-56.020153	2.889443	-73.783892

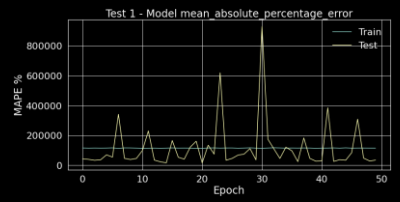
1430423 rows x 8 columns

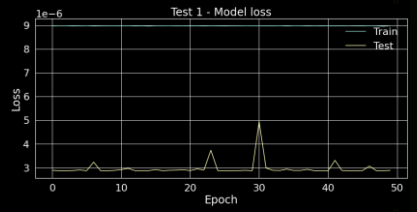


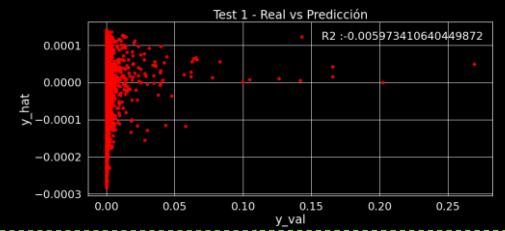
	Variable	Autovalor	Participacion	Acumulado
0	year	2.846423e+21	1.000000e+02	100.0
1	sitc	7.943518e+12	2.790702e-07	100.0
2	Value	6.403370e+09	2.249620e-10	100.0
3	Transaction	3.520487e+09	1.236811e-10	100.0
4	lat_dest	5.603693e+08	1.968679e-11	100.0
5	lon_origin	4.639822e+08	1.630053e-11	100.0
6	lat_origin	2.598734e+08	9.129821e-12	100.0
7	lon_dest	1.583099e+05	5.561714e-15	100.0

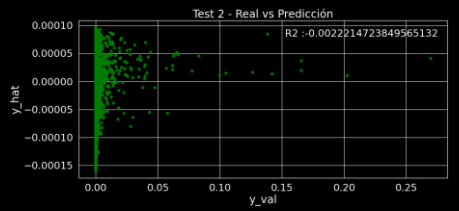
Model

```
Model: "sequential"
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
dense (Dense)                (None, 8)                 40
_________________________________________________________________
dense_1 (Dense)              (None, 4)                 36
_________________________________________________________________
dense_2 (Dense)              (None, 2)                 10
_________________________________________________________________
dense_3 (Dense)              (None, 1)                 3
=================================================================
Total params: 89
Trainable params: 89
Non-trainable params: 0
_________________________________________________________________
None
```

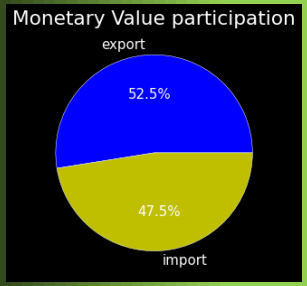


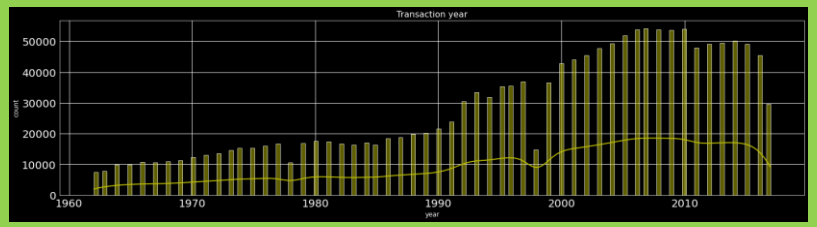


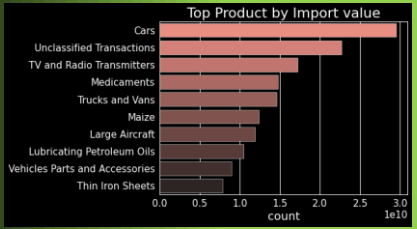


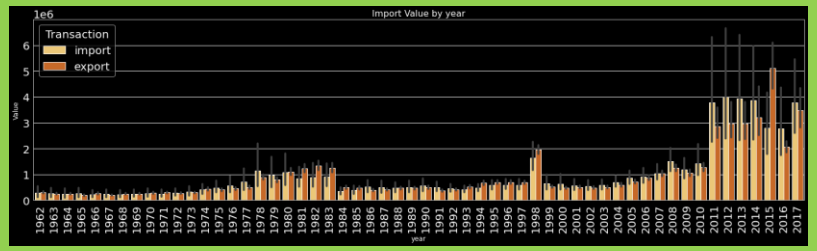


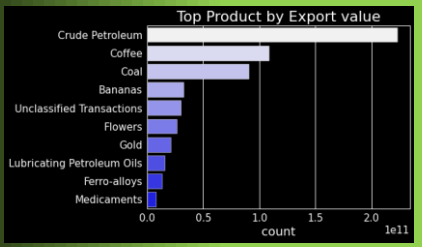
Análisis Exploratorio de datos

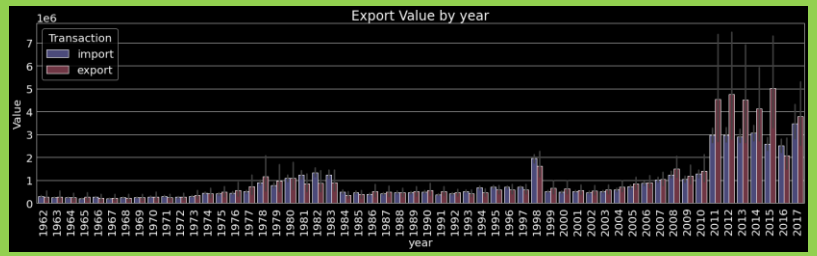


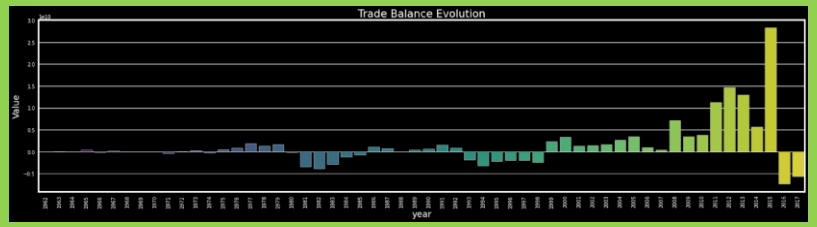


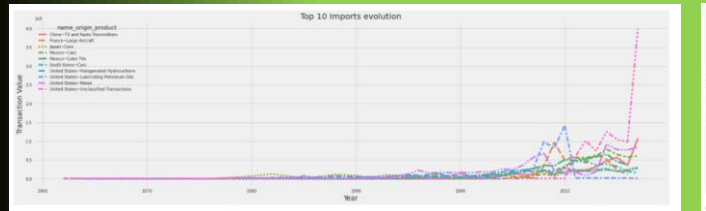




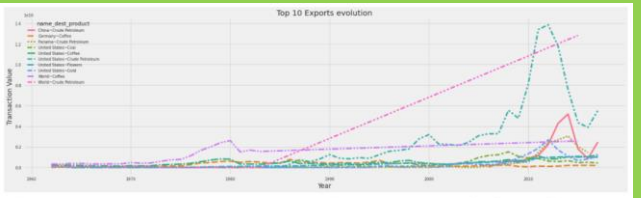








The Imports have been so different along the history, we have bought Lubricating Petroleum Oils to United States, Large Aircraft to France, Cars to Mexico and TV and Radio Transmitters to China



In this graphic we can see exactly historically which products we sell to which countries with the highest value transactions, the Crude Petroleum to USA and the world, and coffe to the world

In the last ten years we have Crude Petroleum sold to China and Panama and Gold to USA