

Laboratorio 3

**Análisis Exploratorio:**

Resumen de los datos:

Anio	Mes	GLP	GasAviacion	GasSuperior	GasRegular
Min. :2001	Min. : 1.000	Min. :100562	Min. : 0	Min. :193484	Min. : 81015
1st Qu.:2005	1st Qu.: 3.000	1st Qu.:200698	1st Qu.: 396	1st Qu.:351681	1st Qu.:183836
Median :2010	Median : 6.000	Median :346373	Median : 1693	Median :430117	Median :259848
Mean :2010	Mean : 6.419	Mean :353078	Mean : 2926	Mean :447353	Mean :309429
3rd Qu.:2014	3rd Qu.: 9.000	3rd Qu.:486982	3rd Qu.: 3260	3rd Qu.:537273	3rd Qu.:412695
Max. :2019	Max. :12.000	Max. :935986	Max. :27979	Max. :803217	Max. :867761
			NA's :64		
Kerosina	rTurboJet	Diesel	DieselLS	DieselULS	Bunker
Min. : 1000	Min. : 23906	Min. : 229765	Min. : 696963	Min. : 6049	Min. : 26754
1st Qu.: 33755	1st Qu.: 59285	1st Qu.: 620918	1st Qu.: 890987	1st Qu.:17026	1st Qu.: 206417
Median : 52188	Median : 81851	Median : 767285	Median :1002278	Median :29946	Median : 315967
Mean : 54975	Mean : 84991	Mean : 782290	Mean :1034288	Mean :26715	Mean : 328340
3rd Qu.: 67765	3rd Qu.:105126	3rd Qu.: 904976	3rd Qu.:1205289	3rd Qu.:38546	3rd Qu.: 425414
Max. :184094	Max. :158719	Max. :1595699	Max. :1592580	Max. :39867	Max. :1051764
NA's :28	NA's :180	NA's :18	NA's :204	NA's :215	
Asfalto	PetCoke	AceitesLub	GrasasLub	Solventes	Naftas
Min. : 74.88	Min. : 0	Min. :13873	Min. :167.3	Min. : 4398	Min. :342.6
1st Qu.: 3020.70	1st Qu.:148519	1st Qu.:15023	1st Qu.:198.7	1st Qu.: 5180	1st Qu.:342.6
Median : 6113.90	Median :158237	Median :17927	Median :410.4	Median : 5539	Median :342.6
Mean : 7444.46	Mean :186664	Mean :17500	Mean :515.1	Mean : 6880	Mean :342.6
3rd Qu.:10376.20	3rd Qu.:178746	3rd Qu.:19372	3rd Qu.:836.8	3rd Qu.: 7960	3rd Qu.:342.6
Max. :48364.50	Max. :583080	Max. :21367	Max. :995.5	Max. :11978	Max. :342.6
NA's :10	NA's :112	NA's :216	NA's :216	NA's :216	NA's :221
Ceras	Butano	PetroleoReconst	MTBE	Orimulsion	MezclasOleosas
Min. :172.0	Min. : 0.37	Min. :356364	Min. : 0	Min. :249983	Min. : 475.5
1st Qu.:314.2	1st Qu.: 72.29	1st Qu.:360619	1st Qu.: 0	1st Qu.:312030	1st Qu.:1911.9
Median :380.3	Median : 72.29	Median :367573	Median :11062	Median :315916	Median :1944.3
Mean :376.8	Mean : 68.07	Mean :489360	Mean : 8904	Mean :315469	Mean :1755.9
3rd Qu.:487.5	3rd Qu.: 74.71	3rd Qu.:718114	3rd Qu.:13299	3rd Qu.:325083	3rd Qu.:2170.2
Max. :512.7	Max. :144.57	Max. :730957	Max. :19431	Max. :344685	Max. :2277.5
NA's :216	NA's :198	NA's :202	NA's :206	NA's :209	NA's :217
Total					
Min. :1381787					
1st Qu.:2023007					
Median :2383048					
Mean :2471500					
3rd Qu.:2893107					
Max. :4322010					

Gas Aviación cuenta con: 64 NA's

Kerosina: 28 NA's

rTurboJet: 180 NA's

Diesel: 18 NA's

DieselLS: 204 NA's

DieselULS: 215NA'S

Asfalto: 10

PetCoke: 112

AceitesLub: 216  
GrasasLub: 216  
Solventes: 216  
Naftas: 221  
Ceras: 216  
Butano: 198  
PetroleoReconst: 202  
MTBE: 206  
Orimulsion: 209  
MezclasOleosas: 217

### **Tipos de Variables:**

Año: Numérica Categórica  
Mes: Numérica Categórica  
GLP: Numérica Continua  
GasAviación: Numérica Continua  
GasSuperior: Numérica Continua  
GasRegular: Numérica Continua  
Kerosina: Numérica Continua  
rTurboJet: Numérica Continua  
Diesel: Numérica Continua  
DieselLS: Numérica Continua  
DieselULS: Numérica Continua  
Bunker: Numérica Continua  
Asfalto: Numérica Continua  
PetCoke: Numérica Continua  
AceitesLub: Numérica Continua  
GrasasLub: Numérica Continua  
Solventes: Numérica Continua  
Naftas: Numérica Continua  
Ceras: Numérica Continua  
Butano: Numérica Continua  
PetroleoReconst: Numérica Continua  
MTBE: Numérica Continua  
Orimulsión: Numérica Continua  
MezclasOleosas: Numérica Continua  
Total: Numérica Continua

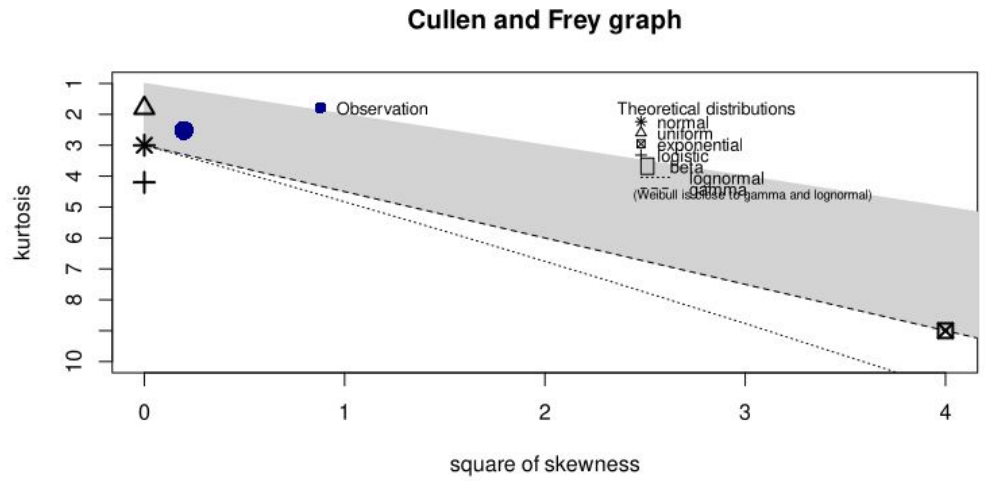
### **Análisis Exploratorio**

- **Variables Categóricas**

Las variables categóricas de este dataset son Año y Mes, estas dos variables solo sirven para identificadores de los datos numéricos continuos.

- **Variables Numéricas**

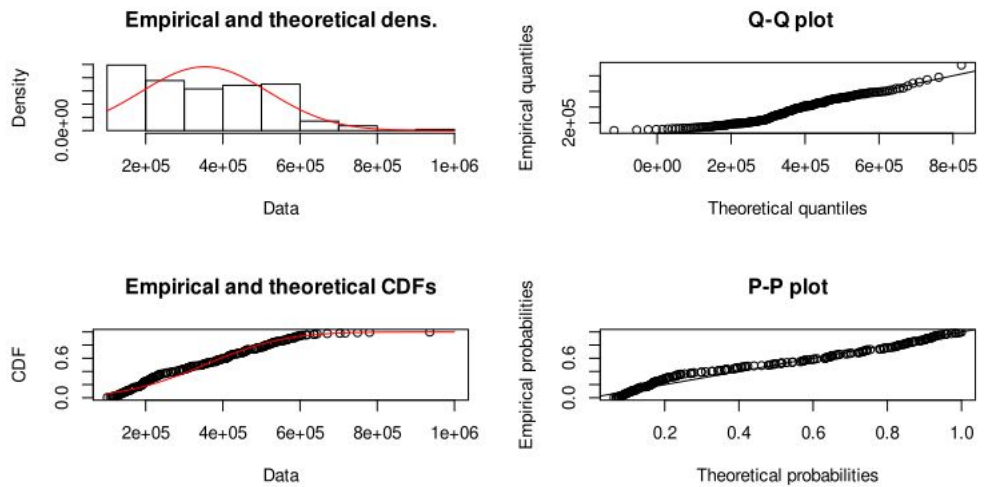
- GLP:



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min: 100561.5 max: 935986.5
median: 346372.8
mean: 353078
estimated sd: 165777.6
estimated skewness: 0.4450051
estimated kurtosis: 2.5215

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