

Informe clustering con 3×10^4 series temporales

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Las series temporales utilizadas son las 30000 primeras de la base de datos y para realizar clustering se calcularon 11 medidas de complejidad sobre cada una de ellas. En cuanto a los métodos de clustering se han utilizado 3.

Las medidas de complejidad utilizadas son:

- Kolmogorov
- LempelZiv
- AproximationEntropy
- PermutationEntropy
- PracmaSampleEntropy
- SampleEntropy
- ShannonEntropy
- ChaoShenEntropy
- DirichletEntropy
- MillerMadowEntropy
- ShrinkEntropy

Los métodos de clustering utilizados son:

- KMeans
- CMeans
- HClust

Los métodos de predicción utilizados son:

- Arima
- Ets
- HoltWinters
- StrucTS
- Bats
- Stl

La división en bloques de series temporales es:

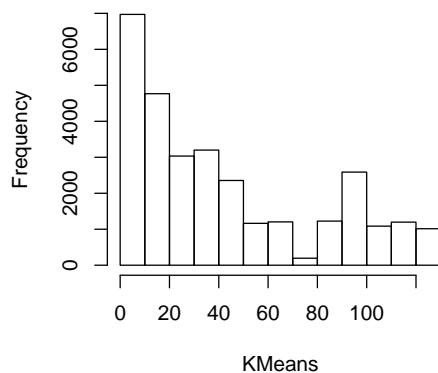
- A: $1-10^4$
- B: $1.0001 \times 10^4-2 \times 10^4$
- C: $2.0001 \times 10^4-3 \times 10^4$

1 Clustering del conjunto completo

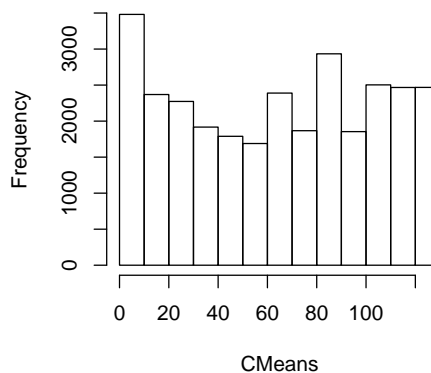
1.1 Informe individual de cluster

	ncenters	max.density	min.density	standard.desviation
KMeans	129.00	1530.00	1.00	283.09
CMeans	129.00	693.00	1.00	131.09
HClust	129.00	2192.00	1.00	383.86

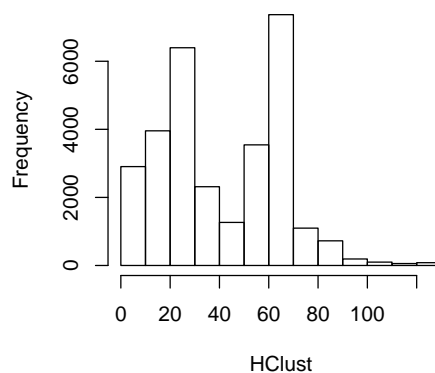
Histogram of hist_kmeans



Histogram of hist_cmeans



Histogram of hist_hclust



1.2 Comparación por parejas de clustering

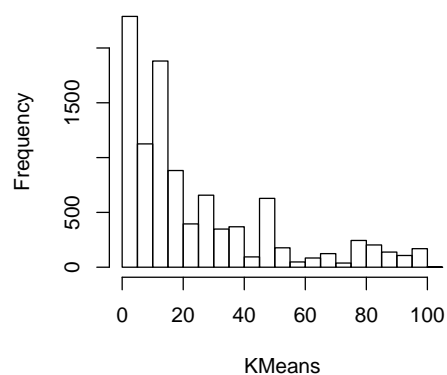
	centers.identical	centers.different	centers.comun.percent	similarility.mean
KMeans-CMeans	1	5	0	29
KMeans-HClust	8	0	6	45
CMeans-HClust	1	1	0	24

2 Clustering Bloque A

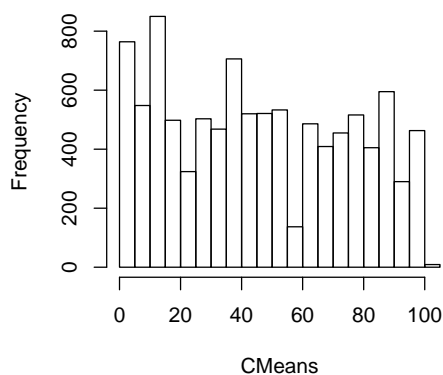
2.1 Informe individual de cluster

	ncenters	max.density	min.density	standard.desviation
KMeans	101.00	749.00	1.00	148.18
CMeans	101.00	311.00	1.00	63.77
HClust	101.00	1534.00	1.00	193.29

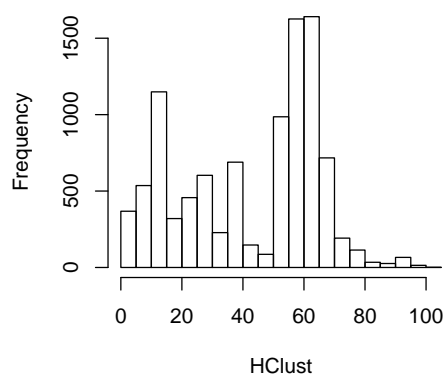
Histogram of hist_kmeans



Histogram of hist_cmeans



Histogram of hist_hclust



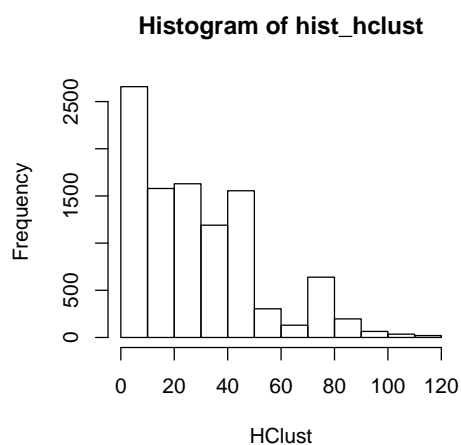
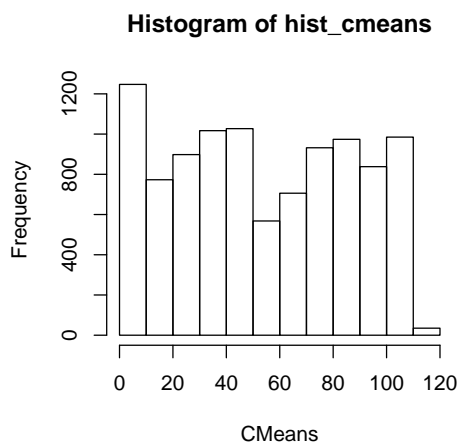
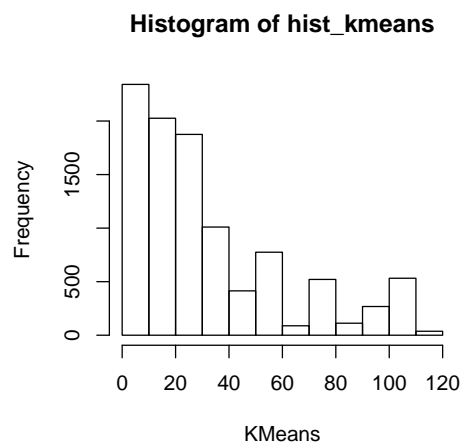
2.2 Comparación por parejas de clustering

	centers.identical	centers.different	centers.comun.percent	similarility.mean
KMeans-CMeans	2	1	1	29
KMeans-HClust	4	0	3	50
CMeans-HClust	0	0	0	26

3 Clustering Bloque B

3.1 Informe individual de cluster

	ncenters	max.density	min.density	standard.desviation
KMeans	111.00	604.00	1.00	104.61
CMeans	111.00	278.00	1.00	54.72
HClust	111.00	608.00	1.00	128.05



3.2 Comparación por parejas de clustering

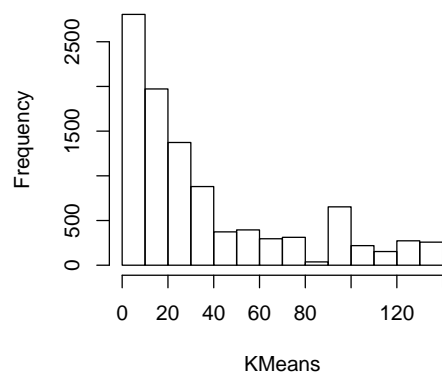
	centers.identical	centers.different	centers.comun.percent	similarity.mean
KMeans-CMeans	2	7	1	30
KMeans-HClust	8	0	7	49
CMeans-HClust	1	1	0	28

4 Clustering Bloque C

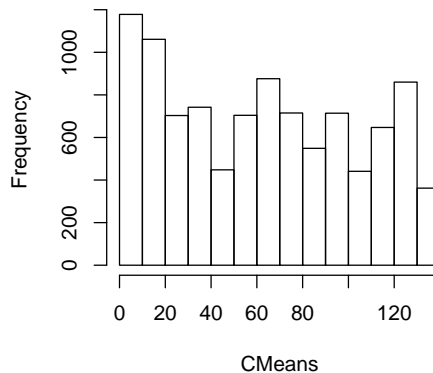
4.1 Informe individual de cluster

	ncenters	max.density	min.density	standard.desviation
KMeans	139.00	535.00	1.00	104.47
CMeans	139.00	194.00	1.00	52.56
HClust	139.00	719.00	1.00	114.96

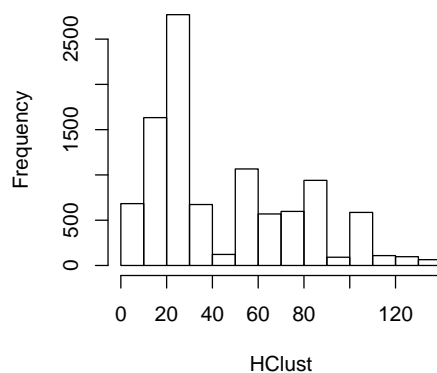
Histogram of hist_kmeans



Histogram of hist_cmeans



Histogram of hist_hclust



4.2 Comparación por parejas de clustering

	centers.identical	centers.different	centers.comun.percent	similarility.mean
KMeans-CMeans	14	0	10	41
KMeans-HClust	7	0	5	47
CMeans-HClust	4	0	2	36

5 Análisis Comparación Conjunto total y Bloque A

	centers.identical	centers.different	centers.comun.percent	similarity.mean
KMeans_X-KMeans_Subset	0	127	0	0
KMeans_X-CMeans_Subset	0	127	0	0
KMeans_X-HClust_Subset	0	127	0	0
CMeans_X-KMeans_Subset	0	127	0	0
CMeans_X-CMeans_Subset	0	127	0	0
CMeans_X-HClust_Subset	0	127	0	0
HClust_X-KMeans_Subset	0	127	0	0
HClust_X-CMeans_Subset	0	127	0	0
HClust_X-HClust_Subset	0	127	0	0

6 Análisis Comparación Conjunto total y Bloque B

	centers.identical	centers.different	centers.comun.percent	similarity.mean
KMeans_X-KMeans_Subset	2	127	1	1
KMeans_X-CMeans_Subset	2	127	1	1
KMeans_X-HClust_Subset	2	127	1	1
CMeans_X-KMeans_Subset	2	127	1	1
CMeans_X-CMeans_Subset	2	127	1	1
CMeans_X-HClust_Subset	2	127	1	1
HClust_X-KMeans_Subset	2	127	1	1
HClust_X-CMeans_Subset	2	127	1	1
HClust_X-HClust_Subset	2	127	1	1

7 Análisis Comparación Conjunto total y Bloque C

	centers.identical	centers.different	centers.comun.percent	similarity.mean
KMeans_X-KMeans_Subset	2	127	1	1
KMeans_X-CMeans_Subset	2	127	1	1
KMeans_X-HClust_Subset	2	127	1	1
CMeans_X-KMeans_Subset	2	127	1	1
CMeans_X-CMeans_Subset	2	127	1	1
CMeans_X-HClust_Subset	2	127	1	1
HClust_X-KMeans_Subset	2	127	1	1
HClust_X-CMeans_Subset	2	127	1	1
HClust_X-HClust_Subset	2	127	1	1