

#### INTRODUCCIÓ

https://www.kaggle.com/amarpandey/world-life-expectancy-18002016

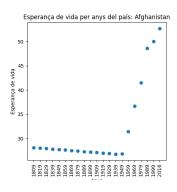
#### Llibreries utilitzades:

- Numpy
- Pandas
- Matplolib
- Sklearn
- Scipy

#### BASE DE DADES

⊿ A	В	С	D	Е	F	G	Н	1	J	K	L	M	N	0	Р	Q	R
1 Life expectancy	1800	1801	1802	1803	1804	1805	1806	1807	1808	1809	1810	1811	1812	1813	1814	1815	1816
2 Abkhazia																	
3 Afghanistan	28,21	28,2	28,19	28,18	28,17	28,16	28,15	28,14	28,13	28,12	28,11	28,1	28,09	28,08	28,07	28,06	28,05
4 Akrotiri and Dhekelia																	
5 Albania	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4	35,4
6 Algeria	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82	28,82
7 American Samoa																	
8 Andorra																	
9 Angola	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98	26,98
10 Anguilla																	
11 Antigua and Barbuda	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54	33,54
12 Argentina	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2	33,2
13 Armenia	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
14 Aruba	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42	34,42
15 Australia	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05	34,05
16 Austria	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4	34,4
17 Azerbaijan	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17	29,17
18 Bahamas	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18	35,18
19 Bahrain	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3	30,3
20 Bangladesh	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5	25,5
21 Barbados	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12	32,12
22 Belarus	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2	36,2
23 Belgium	40	40,01	40,02	40,02	40,03	40,04	40,05	40,06	40,06	40,07	40,08	40,09	40,1	40,1	40,11	40,12	40,13
24 Belize	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5	26,5
25 Benin	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

### ESPERANÇA DE VIDA DE CADA PAÍS



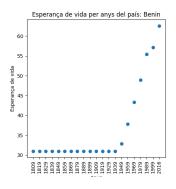






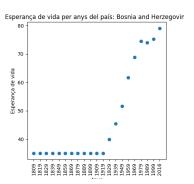




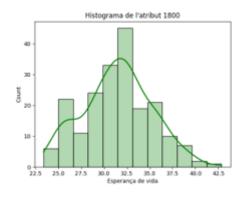


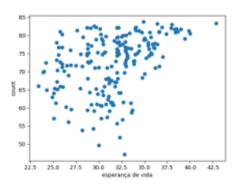


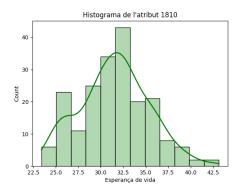


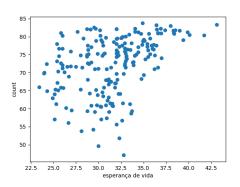


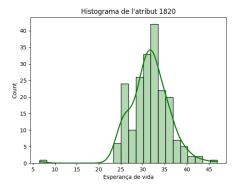
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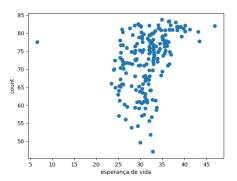


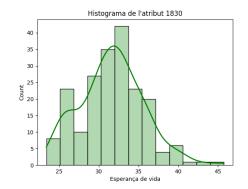


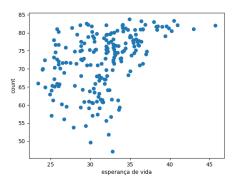




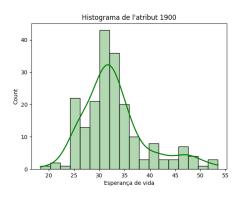


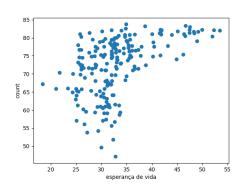


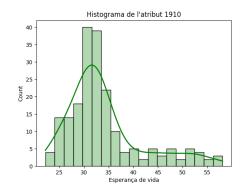


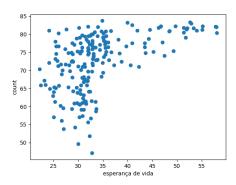


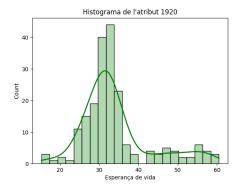
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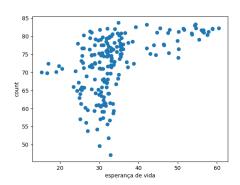


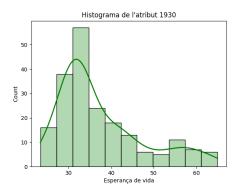


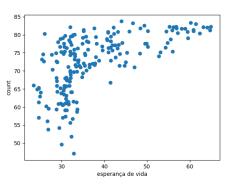




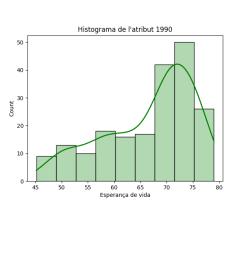


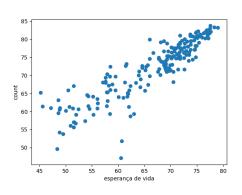


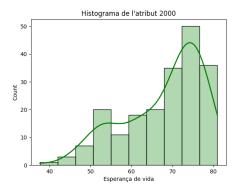


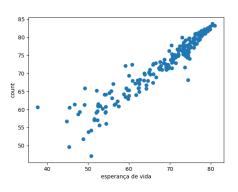


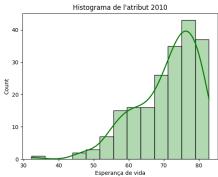
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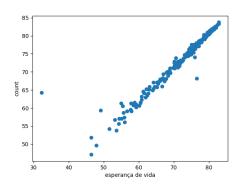


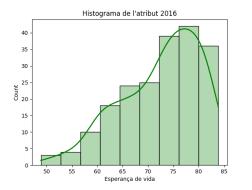


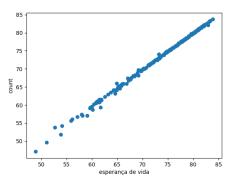








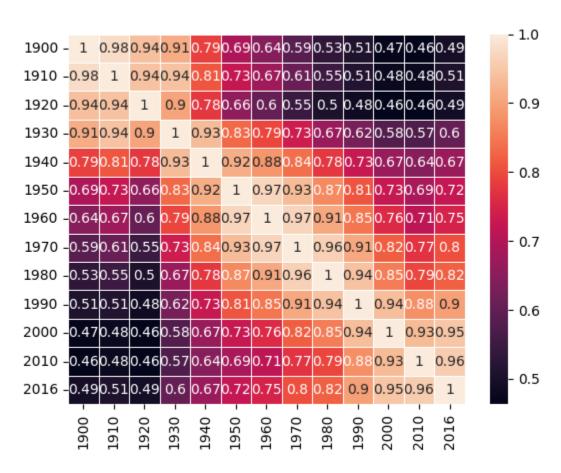




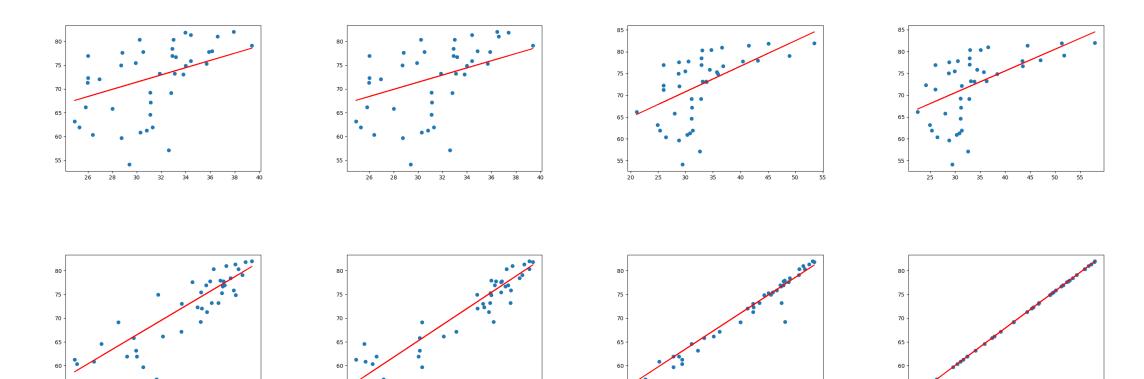
#### TEST DE SHAPIRO

Atribut 1 Any: 1800> Estadistic: 0.9887773394584656   P-Valor: 0.11583148688077927
Atribut 2 Any: 1801> Estadistic: 0.9861128926277161   P-Valor: 0.04586431756615639
Atribut 3 Any: 1802> Estadistic: 0.9872831106185913   P-Valor: 0.06893709301948547
Atribut 4 Any: 1803> Estadistic: 0.9921090006828308   P-Valor: 0.34993278980255127
Atribut 5 Any: 1804> Estadistic: 0.9880924820899963   P-Valor: 0.0913628488779068
Atribut 6 Any: 1805> Estadistic: 0.983538806438446   P-Valor: 0.018868504092097282
Atribut 7 Any: 1806> Estadistic: 0.9772395491600037   P-Valor: 0.0023758108727633953
Atribut 8 Any: 1807> Estadistic: 0.9863826632499695   P-Valor: 0.050377920269966125
Atribut 9 Any: 1808> Estadistic: 0.9765198230743408   P-Valor: 0.00189547601621598
Atribut 10 Any: 1809> Estadistic: 0.97993004322052   P-Valor: 0.005640340968966484

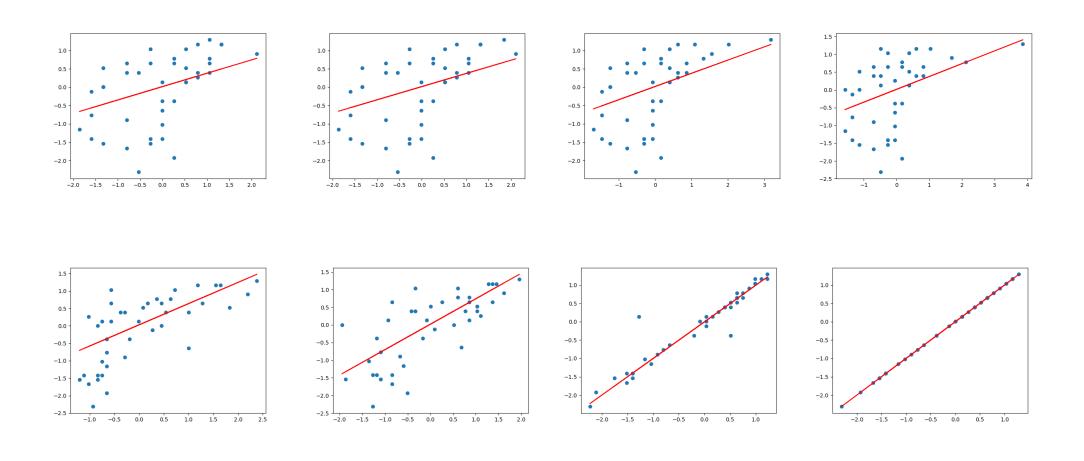
#### CORRELACIÓ ENTRE DADES



# REGRESSIÓ SENSE NORMALITZAR



# REGRESSIÓ AMB NORMALITZACIÓ



### ERRORS QUADRÀTICS (MSE)

Atributo 1 Any: 1800:

MSE: 44.21246510698685 R2 score: -4.881399661218707

Atributo 11 Any: 1810:

MSE: 43.84808616079501 R2 score: -4.922067014933038

Atributo 31 Any: 1830:

MSE: 42.38370179335465 R2 score: -2.749826511153811

Atributo 51 Any: 1850:

MSE: 48.862189561219125 R2 score: -3.065682480954413

Atributo 71 Any: 1870:

MSE: 44.680822534197446 R2 score: -3.809068722300725

Atributo 91 Any: 1890:

MSE: 41.91354868870076 R2 score: -1.8771824915583322

Atributo 111 Any: 1910:

MSE: 39.44282456737262 R2 score: -1.6049298436703499

Atributo 131 Any: 1930:

MSE: 33.478544124918194 R2 score: -0.5556762414901519

Atributo 151 Any: 1950:

MSE: 25.946506573853956 R2 score: 0.18085976561084494

Atributo 171 Any: 1970:

MSE: 17.467762443140433 R2 score: 0.5597816668939357

Atributo 191 Any: 1990:

MSE: 8.129141058466812 R2 score: 0.8583021403391822

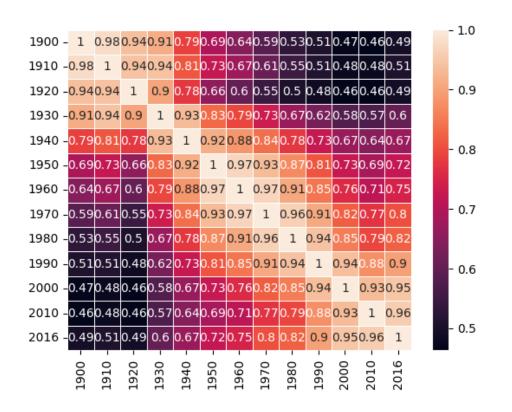
Atributo 201 Any: 2000:

MSE: 7.062119172191595 R2 score: 0.8811598725572126

Atributo 217 Any: 2016:

MSE: 3.07848158135029e-29 R2 score: 1.0

#### ATRIBUTS ESCOLLITS



Atributo 111 Any: 1910 :
 MSE: 39.44282456737262 R2 score: -1.6049298436703499

Atributo 131 Any: 1930 :
 MSE: 33.478544124918194 R2 score: -0.5556762414901519

Atributo 151 Any: 1950 :
 MSE: 25.946506573853956 R2 score: 0.18085976561084494

Atributo 171 Any: 1970 :
 MSE: 17.467762443140433 R2 score: 0.5597816668939357

Atributo 191 Any: 1990 :
 MSE: 8.129141058466812 R2 score: 0.8583021403391822

Atributo 201 Any: 2000 :
 MSE: 7.062119172191595 R2 score: 0.8811598725572126

Atributo 217 Any: 2016 :
 MSE: 3.07848158135029e-29 R2 score: 1.0

### CONCLUSIONS

