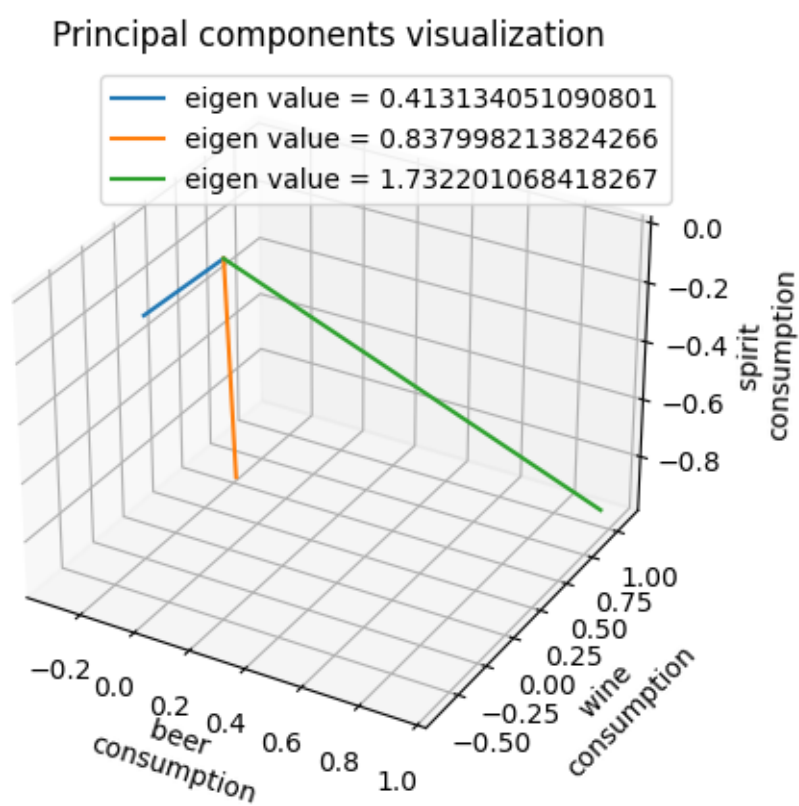


The Final Paper

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November 2022

1 Principal Component Analysis of given dataset

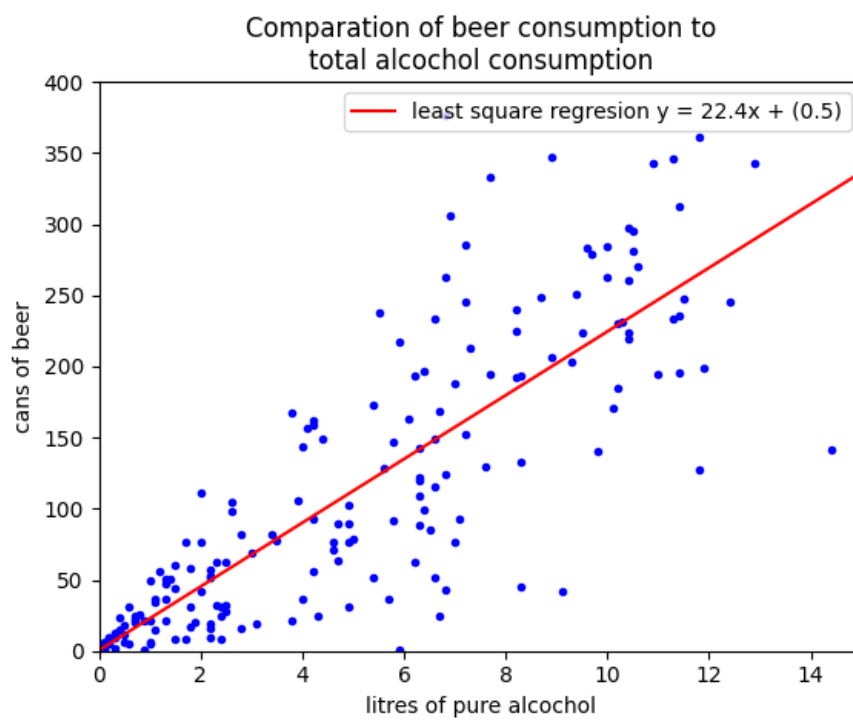


Rysunek 1: PCA vectors visualization

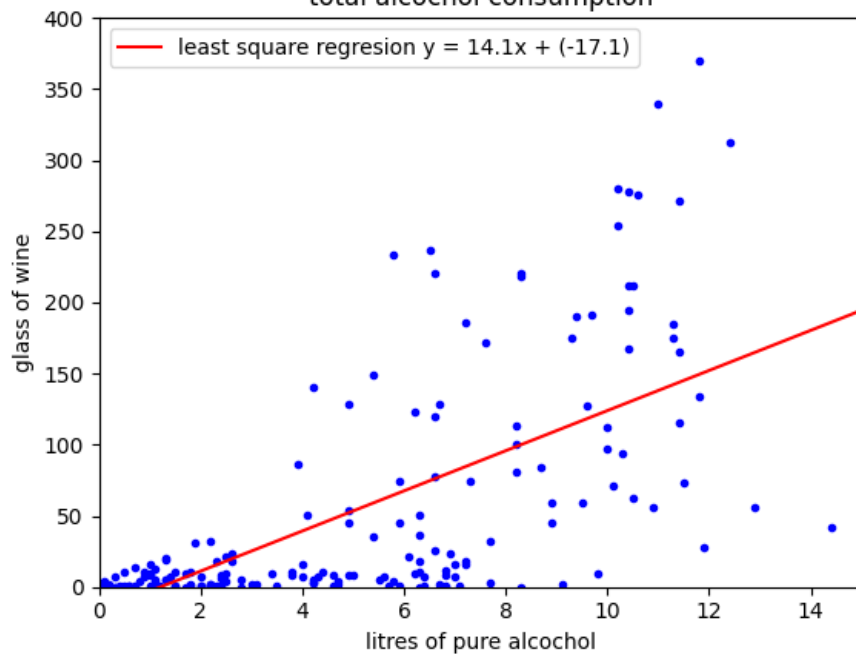
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[ [0.99444444 0.41612443 0.5046385 ]
  [0.41612443 0.99444444 0.15975436]
  [0.5046385 0.15975436 0.99444444]]
```

Rysunek 2: Covariation matrix of standardized data

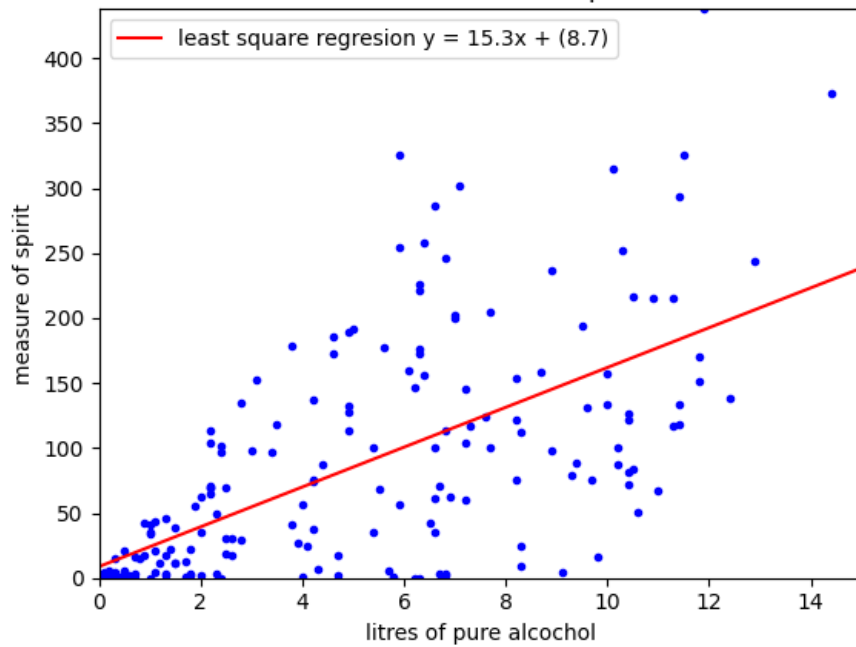
2 comparison of each type of alcohol to average consumption in liters



Comparison of wine consumption to total alchochol consumption

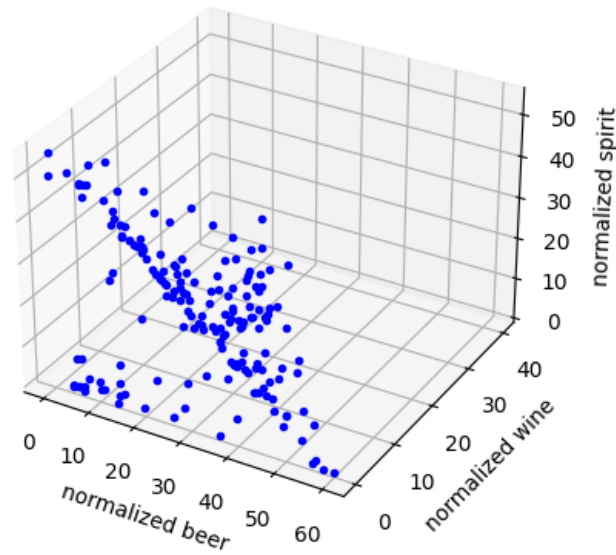


Comparison of spirits consumption to total alchochol consumption

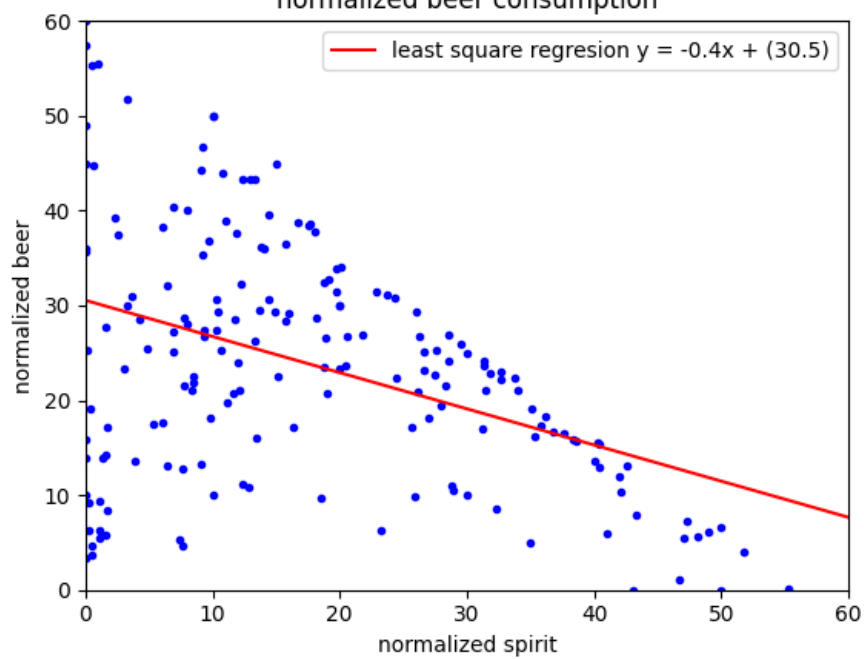


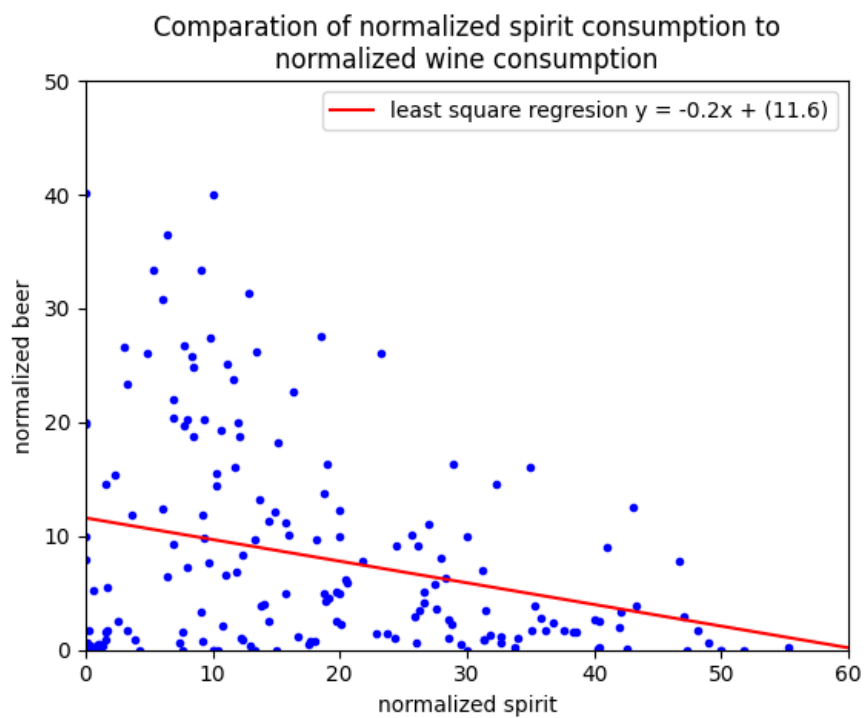
3 normalised of alcohol between the types

normalized alcohol type distribution



Comparison of normalized spirit consumption to normalized beer consumption





4 rankings of biggest consumption by types

	country	beer_servings	spirit_servings	wine_servings	total_litres_of_pure_alcohol
61	France	127	151	370	11.8
136	Portugal	194	67	339	11.0
3	Andorra	245	138	312	12.4
166	Switzerland	185	100	280	10.2
48	Denmark	224	81	278	10.4

Rysunek 3: biggest wine consumption

	country	beer_servings	spirit_servings	wine_servings	total_litres_of_pure_alcohol
117	Namibia	376	3	1	6.8
45	Czech Republic	361	170	134	11.8
62	Gabon	347	98	59	8.9
65	Germany	346	117	175	11.3
98	Lithuania	343	244	56	12.9

Rysunek 4: biggest beer consumption

	country	beer_servings	spirit_servings	wine_servings	total_litres_of_pure_alcohol
68	Grenada	199	438	28	11.9
15	Belarus	142	373	42	14.4
73	Haiti	1	326	1	5.9
141	Russian Federation	247	326	73	11.5
144	St. Lucia	171	315	71	10.1

Rysunek 5: biggest spirit consumption