

BabiesandCovariance

January 7, 2022

```
[1]: babies<-read.csv("babies.csv", header=TRUE, sep = ";")
head(babies)
```

A data.frame: 6 × 7

	bwt <int>	gestation <int>	parity <int>	age <int>	height <int>	weight <int>	smoke <int>
1	120	284	0	27	62	100	0
2	113	282	0	33	64	135	0
3	128	279	0	28	64	115	1
4	123	999	0	36	69	190	0
5	108	282	0	23	67	125	1
6	136	286	0	25	62	93	0

```
[11]: babies4cov<-subset(babies, select=-c(parity,smoke))
head(babies4cov)
```

A data.frame: 6 × 5

	bwt <int>	gestation <int>	age <int>	height <int>	weight <int>
1	120	284	27	62	100
2	113	282	33	64	135
3	128	279	28	64	115
4	123	999	36	69	190
5	108	282	23	67	125
6	136	286	25	62	93

```
[12]: cov(babies4cov)
```

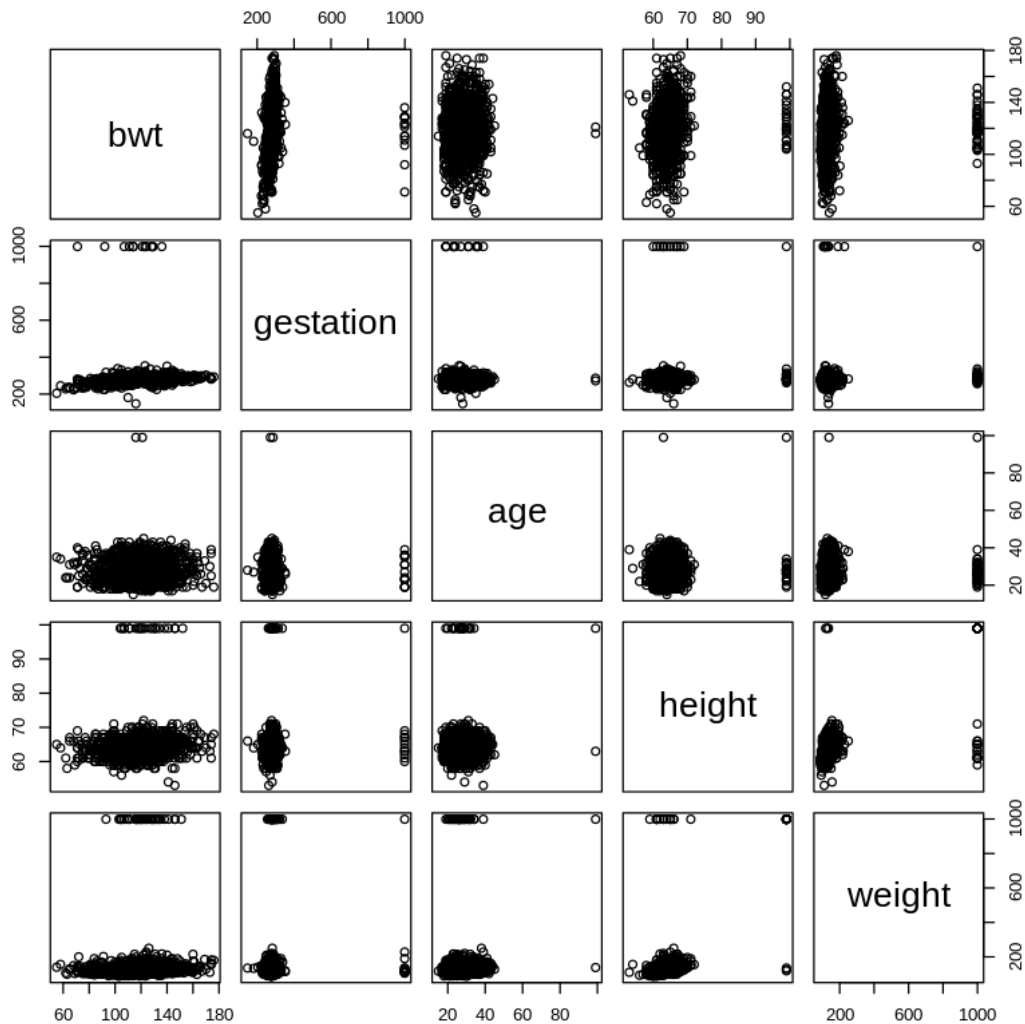
A matrix: 5 × 5 of type dbl

	bwt	gestation	age	height	weight
bwt	332.568177	85.667014	3.419612	12.04483	126.10747
gestation	85.667014	5648.555049	-1.584344	26.08937	549.66666
age	3.419612	-1.584344	41.692750	1.64819	59.89698
height	12.044825	26.089368	1.648190	27.67880	467.56067
weight	126.107473	549.666660	59.896979	467.56067	21866.28366

```
[13]: cor(babies4cov)
```

		bwt	gestation	age	height	weight
A matrix: 5 × 5 of type dbl	bwt	1.00000000	0.062503538	0.029040643	0.12554127	0.04676414
	gestation	0.06250354	1.000000000	-0.003264755	0.06598135	0.04945876
	age	0.02904064	-0.003264755	1.000000000	0.04851805	0.06273172
	height	0.12554127	0.065981354	0.048518050	1.00000000	0.60100328
	weight	0.04676414	0.049458760	0.062731715	0.60100328	1.00000000

```
[14]: pairs(babies4cov)
```



```
[15]: babies4covclean<-babies4cov[(babies4cov$weight<999 & babies4cov$gestation<999 &
  ↳babies4cov$height<99 & babies4cov$age< 99), ]
head(babies4covclean)
cov(babies4covclean)
```

```
cor(babies4covclean)
pairs(babies4covclean)
```

		bwt	gestation	age	height	weight
		<int>	<int>	<int>	<int>	<int>
A data.frame: 6 × 5	1	120	284	27	62	100
	2	113	282	33	64	135
	3	128	279	28	64	115
	5	108	282	23	67	125
	6	136	286	25	62	93
	7	138	244	33	62	178

		bwt	gestation	age	height	weight
A matrix: 5 × 5 of type dbl	bwt	337.159204	120.379444	3.32411585	9.32802826	59.401573
	gestation	120.379444	255.260549	-4.71144351	2.76848470	7.397214
	age	3.324116	-4.711444	33.74935959	-0.07472913	17.830763
	height	9.328028	2.768485	-0.07472913	6.38364942	22.924155
	weight	59.401573	7.397214	17.83076266	22.92415498	432.436451

		bwt	gestation	age	height	weight
A matrix: 5 × 5 of type dbl	bwt	1.00000000	0.41033917	0.031162039	0.201065626	0.15556765
	gestation	0.41033917	1.00000000	-0.050760907	0.068582887	0.02226461
	age	0.03116204	-0.05076091	1.000000000	-0.005091229	0.14759648
	height	0.20106563	0.06858289	-0.005091229	1.000000000	0.43631252
	weight	0.15556765	0.02226461	0.147596481	0.436312519	1.00000000

