

## STATISTICS 3 WS 2017 (Mag. Thomas Forstner)

Course-Number: 366.542

- 20) A linear regression model to predict blood fat content based on weight [kg] and age [years] should be estimated. Verify the assumptions of your model.

ID	Weight	Age	Blood Fat Content
1	84	46	354
2	73	20	190
3	65	52	405
4	70	30	263
5	76	57	451
6	69	25	302
7	63	28	288
8	72	36	385
9	79	57	402
10	75	44	365
11	27	24	209
12	89	31	290
13	65	52	346
14	57	23	254
15	59	60	395
16	69	48	434
17	60	34	220
18	79	51	374
19	75	50	308
20	82	34	220
21	59	46	311
22	67	23	181
23	85	37	274
24	55	40	303
25	63	30	244

Source: <http://people.sc.fsu.edu/~jburkardt/datasets/regression/x09.txt>

- 21) A linear regression model to predict the selling price of a house should be estimated. For a sample of 28 houses various parameters were collected.

ID	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	x11	Y
1	4,9176	1	3,472	0,998	1	7	4	42	aluminum/wood	two story	0	25,9
2	5,0208	1	3,531	1,500	2	7	4	62	brick	two story	0	29,5
3	4,5429	1	2,275	1,175	1	6	3	40	brick/wood	two story	0	27,9
4	4,5573	1	4,050	1,232	1	6	3	54	wood	two story	0	25,9
5	5,0597	1	4,455	1,121	1	6	3	42	aluminum/wood	two story	0	29,9
6	3,8910	1	4,455	0,988	1	6	3	56	brick/wood	two story	0	29,9
7	5,8980	1	5,850	1,24	1	7	3	51	brick/wood	two story	1	30,9
8	5,6039	1	9,520	1,501	0	6	3	32	brick	two story	0	28,9
9	16,4202	2,5	9,800	3,420	2	10	5	42	brick/wood	two story	1	84,9
10	14,4598	2,5	12,800	3,00	2	9	5	14	wood	two story	1	82,9
11	5,8282	1	6,435	1,225	2	6	3	32	brick	two story	0	35,9
12	5,3003	1	4,9883	1,552	1	6	3	30	brick	split level	0	31,5
13	6,2712	1	5,520	0,975	1	5	2	30	brick	split level	0	31,0
14	5,9592	1	6,666	1,121	2	6	3	32	brick/wood	two story	0	30,9
15	5,0500	1	5,00	1,020	0	5	2	46	wood	two story	1	30,0
16	5,6039	1	9,52	1,501	0	6	3	32	brick	two story	0	28,9
17	8,2464	1,5	5,150	1,664	2	8	4	50	wood	two story	0	36,9
18	6,6969	1,5	6,902	1,488	1,5	7	3	22	brick	two story	1	41,9
19	7,7841	1,5	7,102	1,376	1	6	3	17	brick/wood	two story	0	40,5
20	9,0384	1	7,800	1,500	1,5	7	3	23	aluminum/wood	ranch	0	43,9
21	5,9894	1	5,520	1,256	2	6	3	40	wood	two story	1	37,5
22	7,5422	1,5	4,00	1,690	1	6	3	22	brick	two story	0	37,9
23	8,7951	1,5	9,890	1,820	2	8	4	50	brick	two story	1	44,5
24	6,0931	1,5	6,7265	1,652	1	6	3	44	wood	two story	0	37,9
25	8,3607	1,5	9,15	1,777	2	8	4	48	brick	two story	1	38,9
26	8,1400	1	8,00	1,504	2	7	3	3	brick	ranch	0	36,9
27	9,1416	1,5	7,3262	1,831	1,5	8	4	31	wood	two story	0	45,8
28	12,000	1,5	5,000	1,200	2	6	3	30	aluminum/wood	two story	1	41,0

Source: <http://people.sc.fsu.edu/~jburkardt/datasets/regression/x26.txt>

X1 ... local selling prices, in hundreds of dollars / X2 ... number of bathrooms / X3 ... area of the site in thousands of square feet /  
X4 ... size of the living space in thousands of square feet / X5 ... number of garages / X6 ... number of rooms /  
X7 ... number of bedrooms / X8 ... age in years / X9 ... construction type / X10 ... architecture type /  
X11 ... number of fire places / Y ... selling price of house, in hundreds of dollar