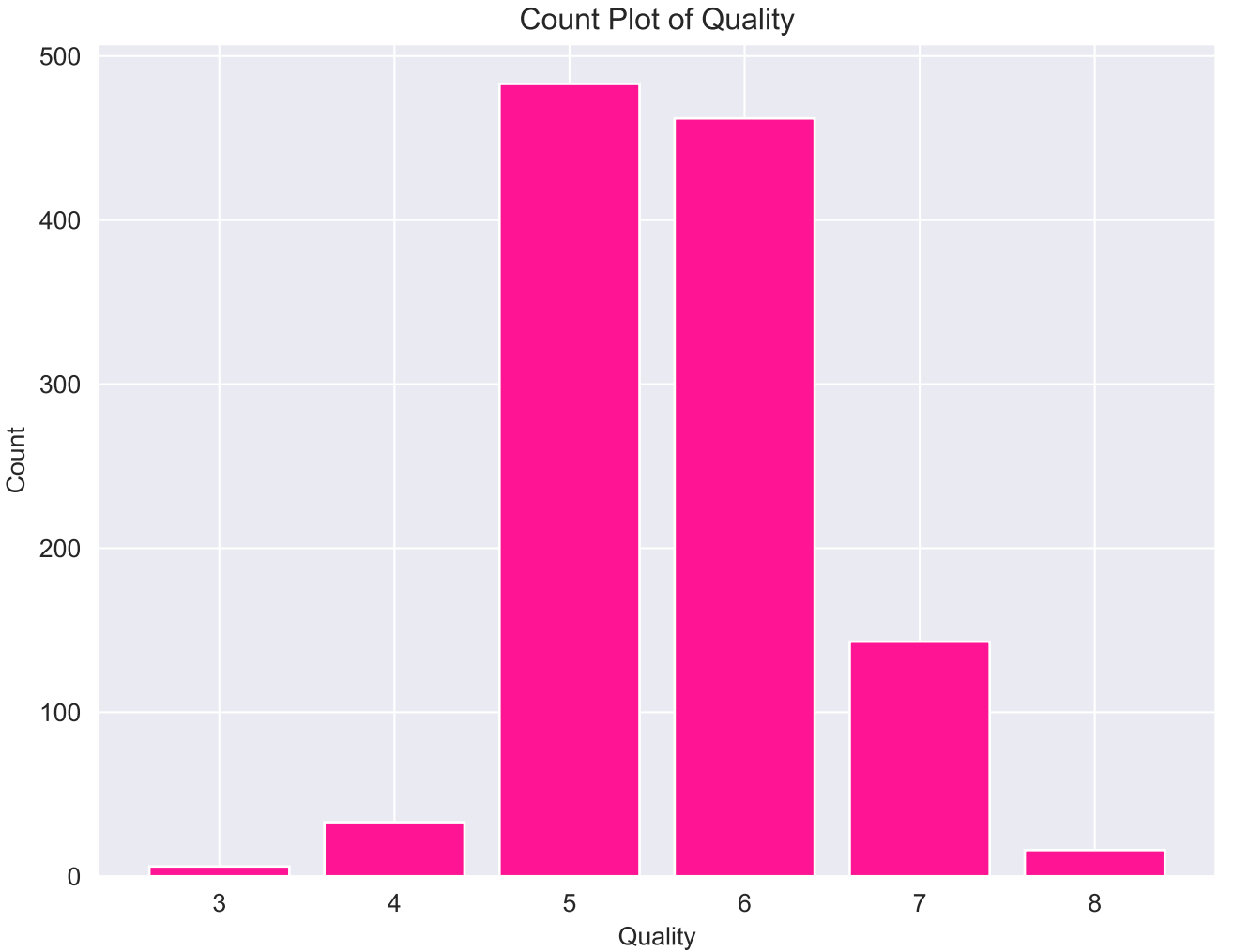
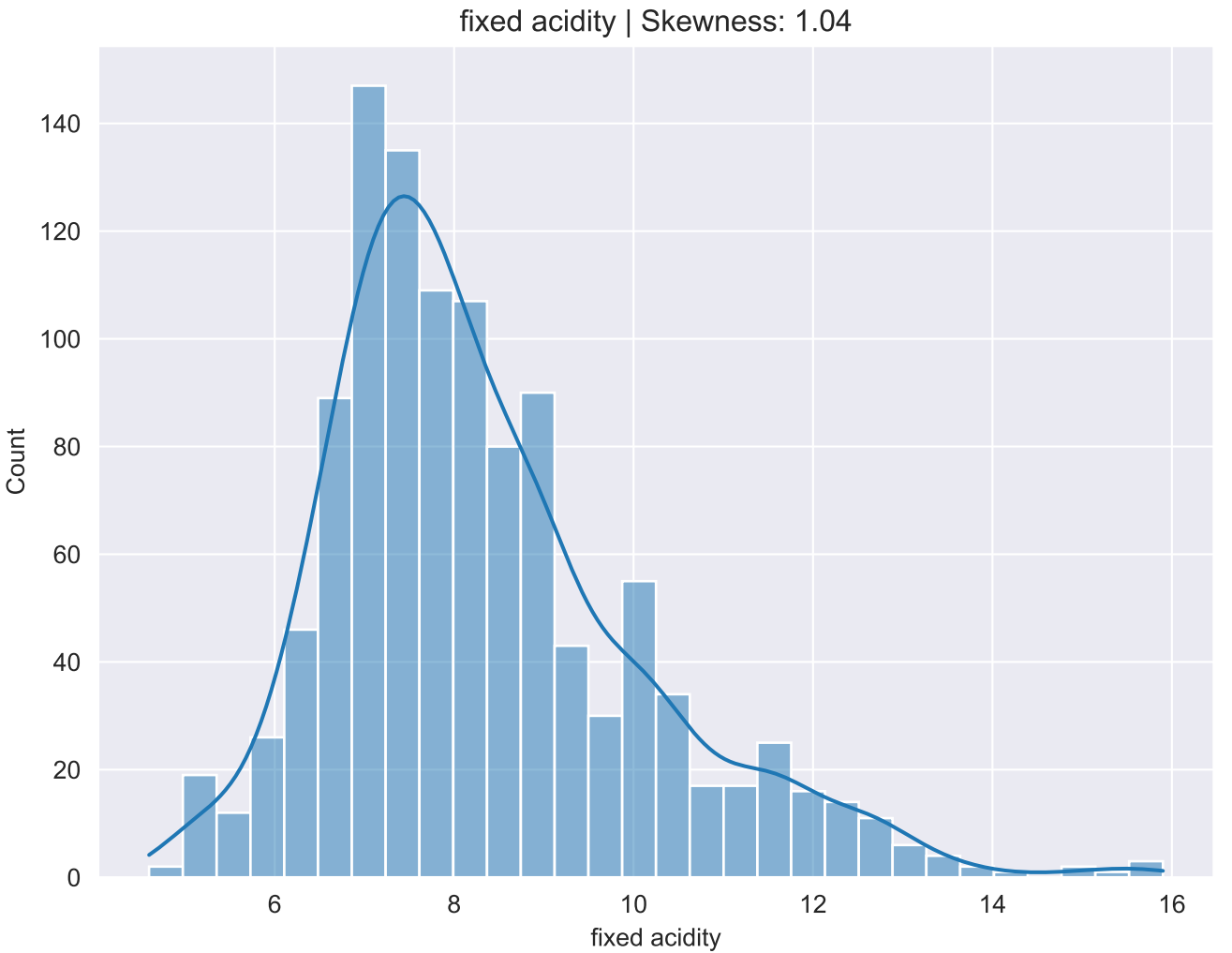
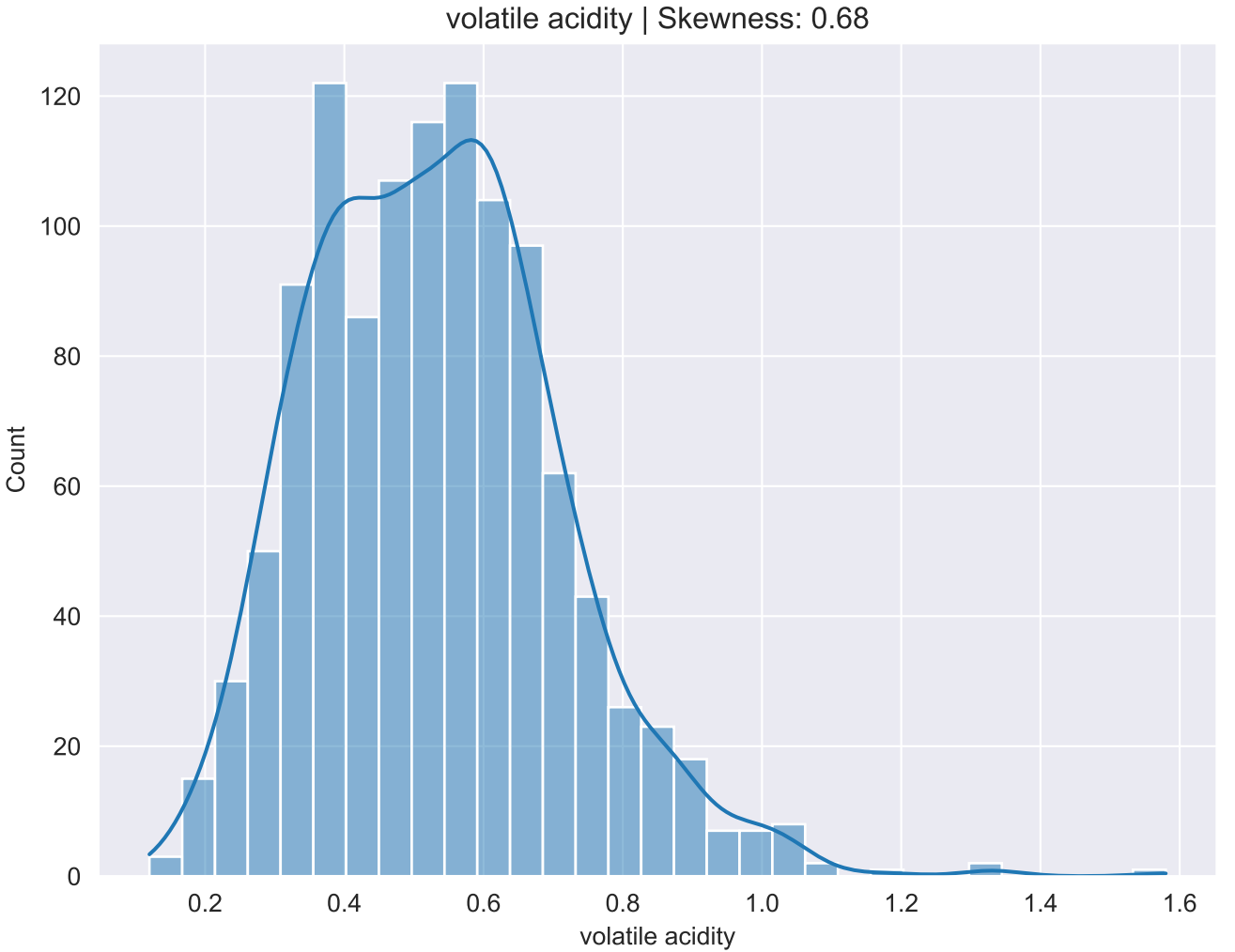
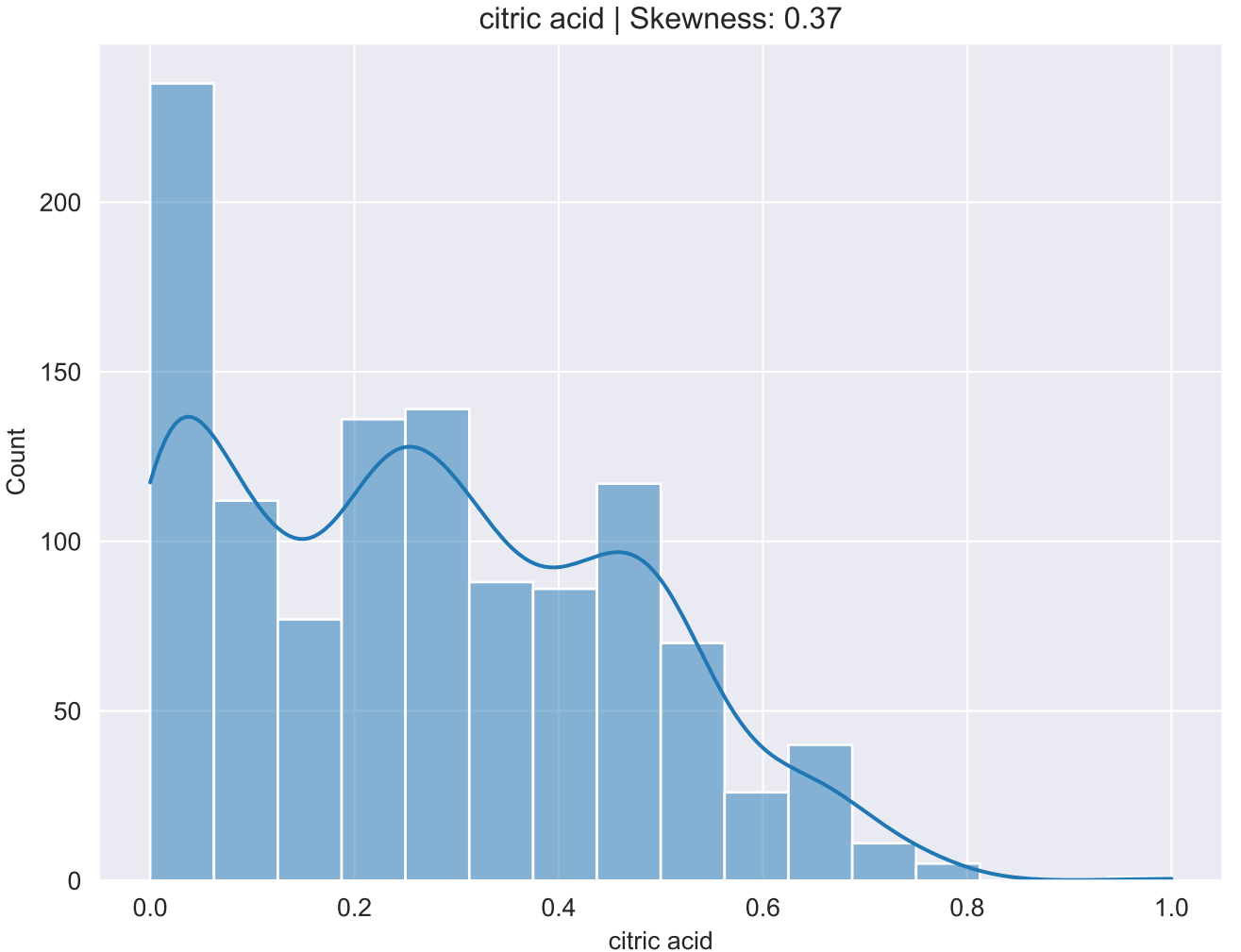
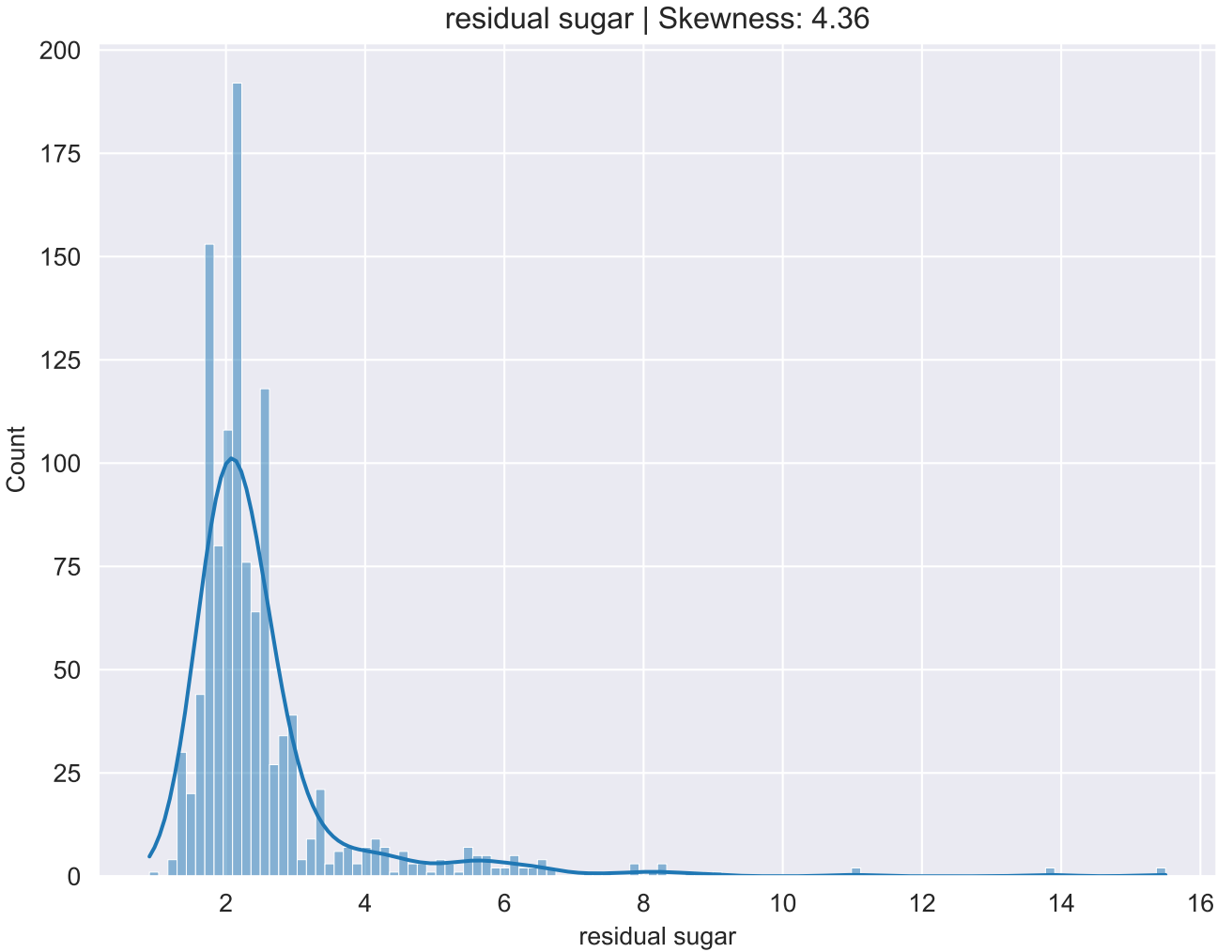
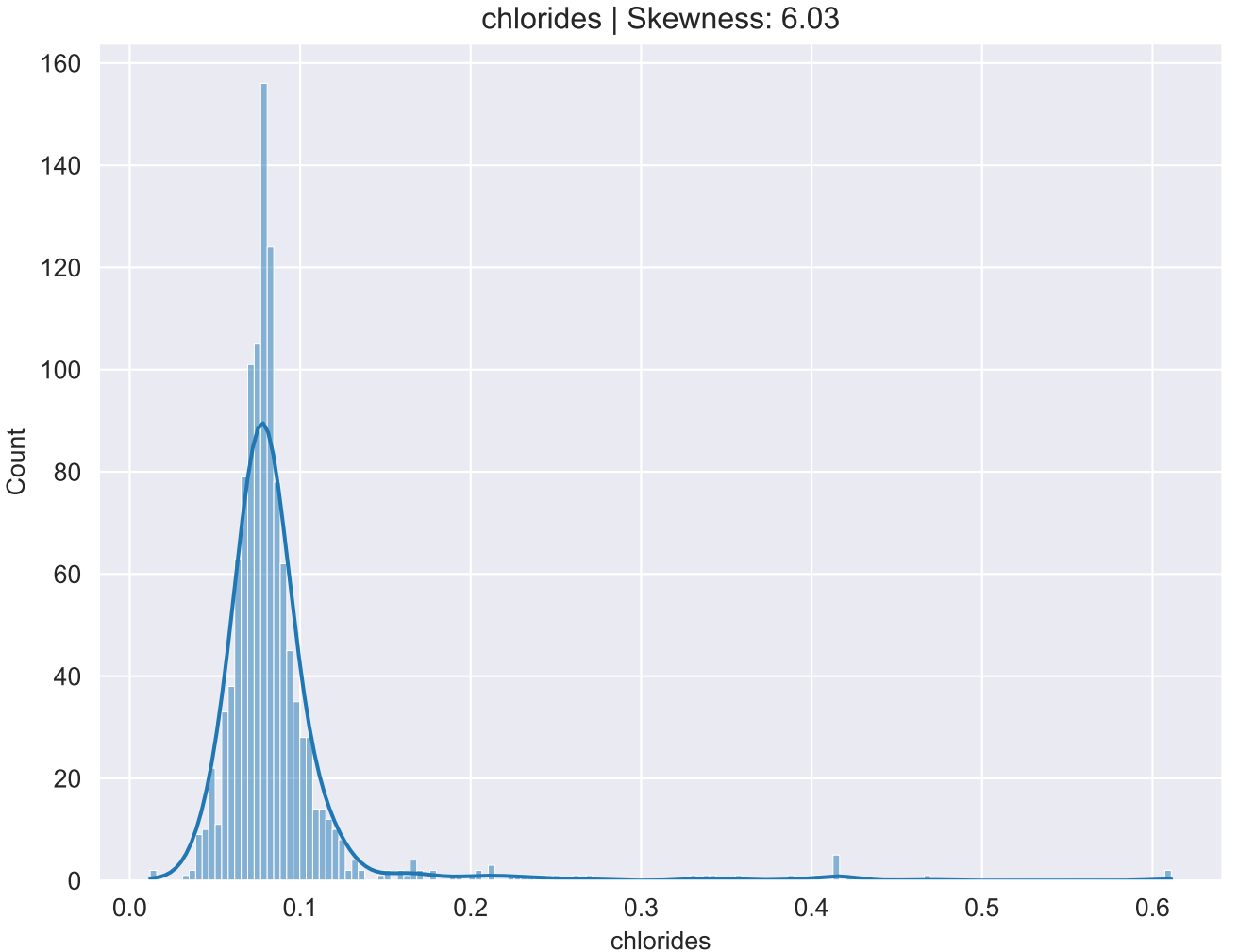

Count Plot of Quality
500
400
300
200
100
0
Count
3
4
5
6
7
8
Quality

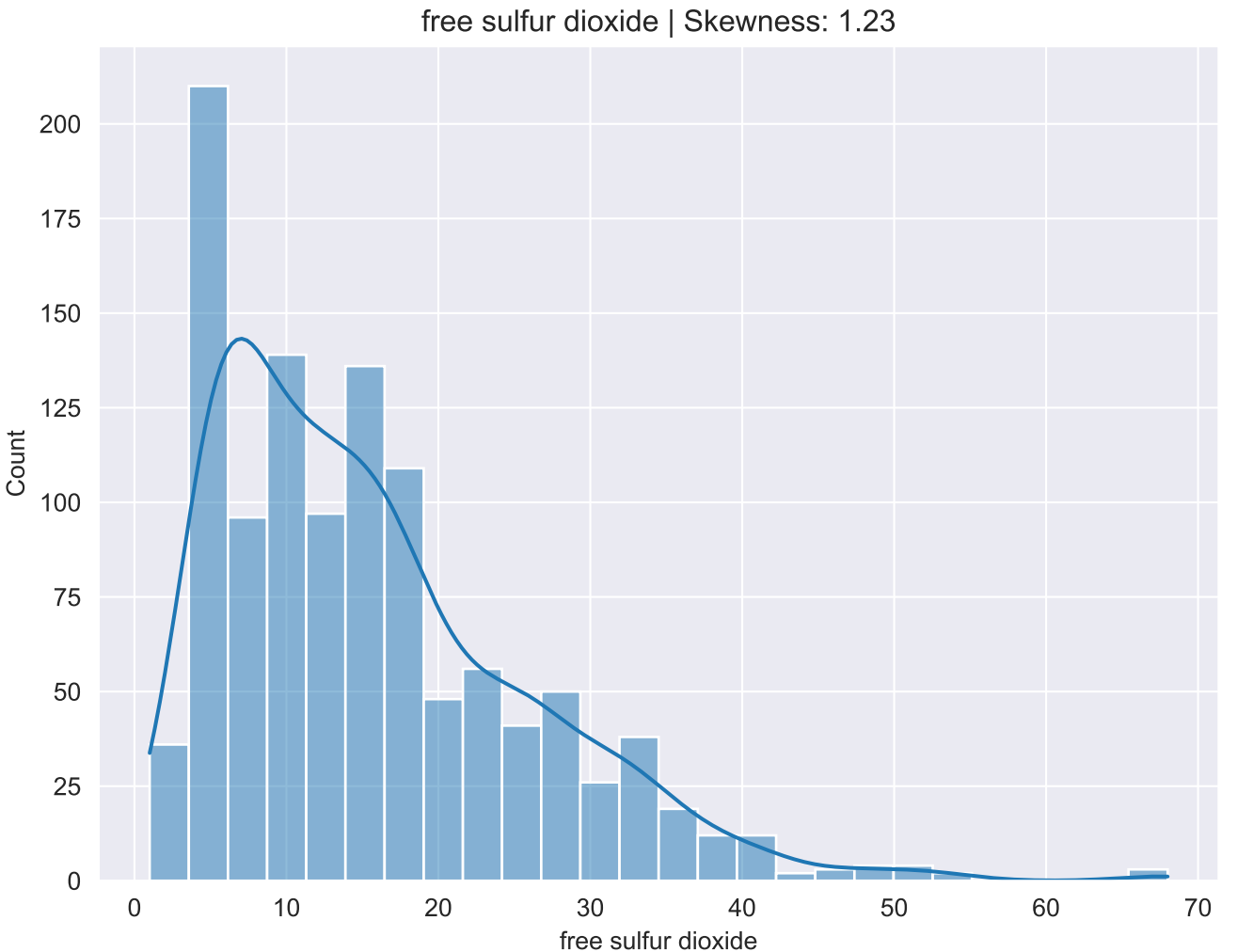

fixed acidity | Skewness: 1.04
Count
0
20
40
60
80
100
120
140
6
8
10
12
14
16
fixed acidity

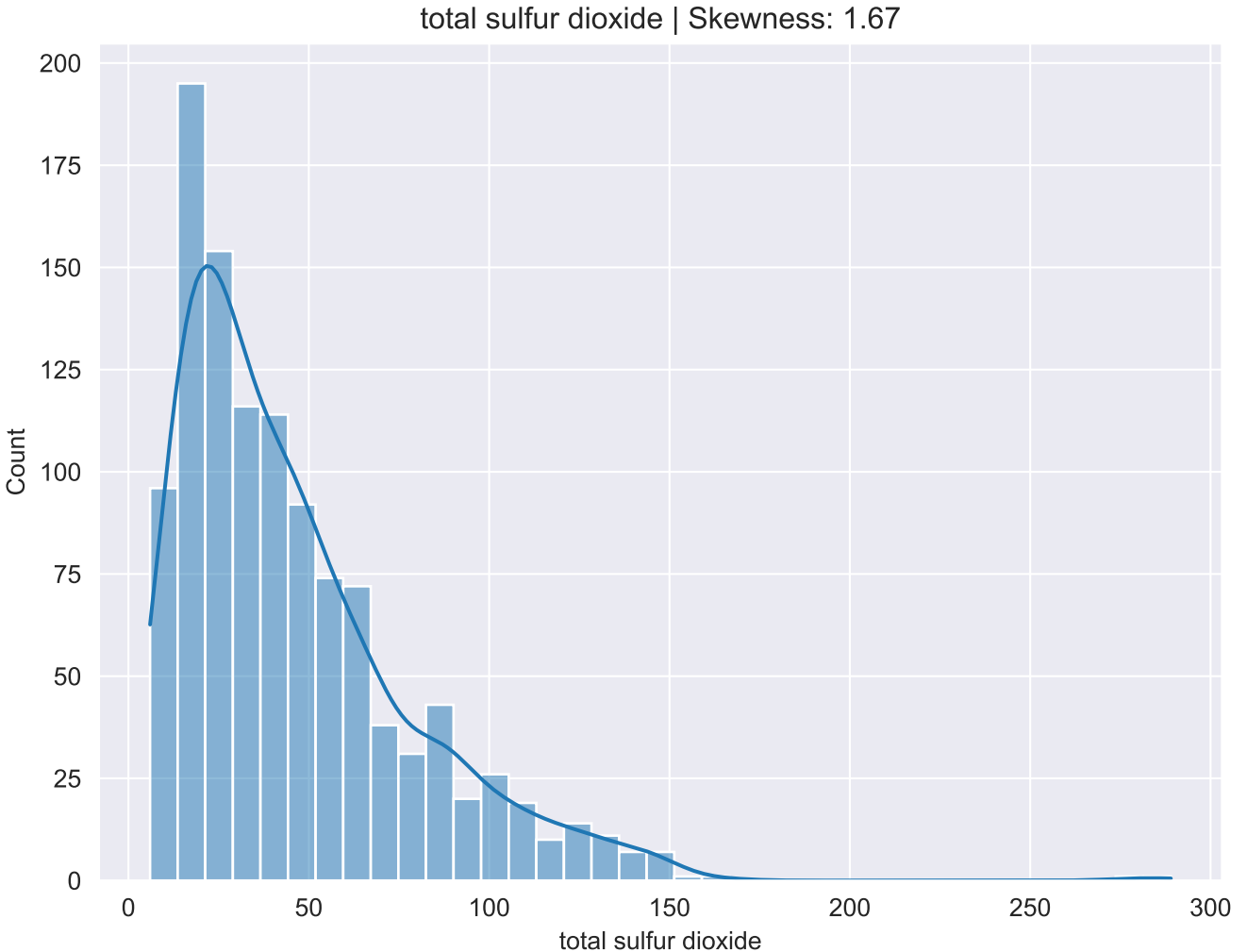

volatile acidity | Skewness: 0.68
Count
0
20
40
60
80
100
120
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
volatile acidity

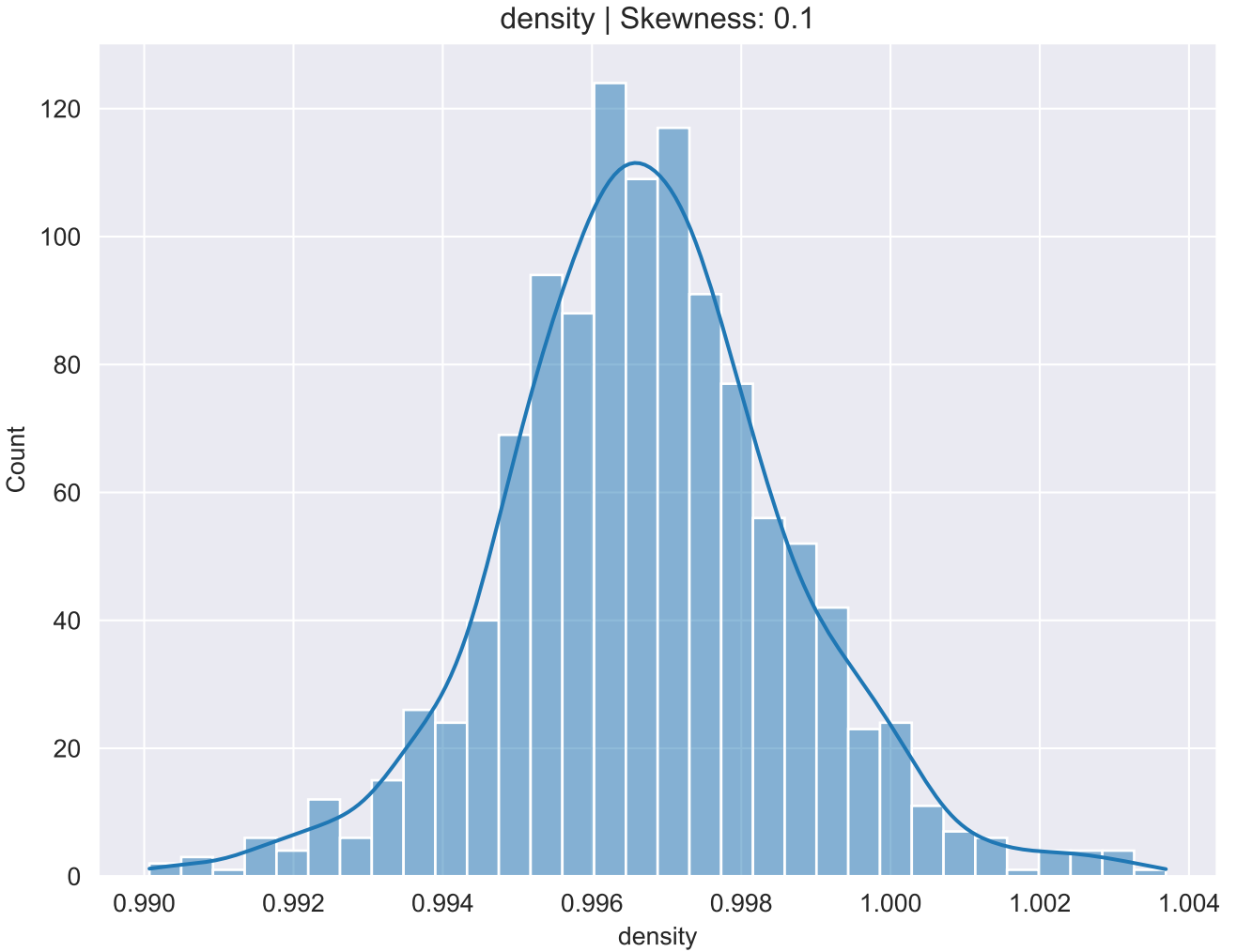

citric acid | Skewness: 0.37
Count
200
150
100
50
0
0.0
0.2
0.4
0.6
0.8
1.0
citric acid

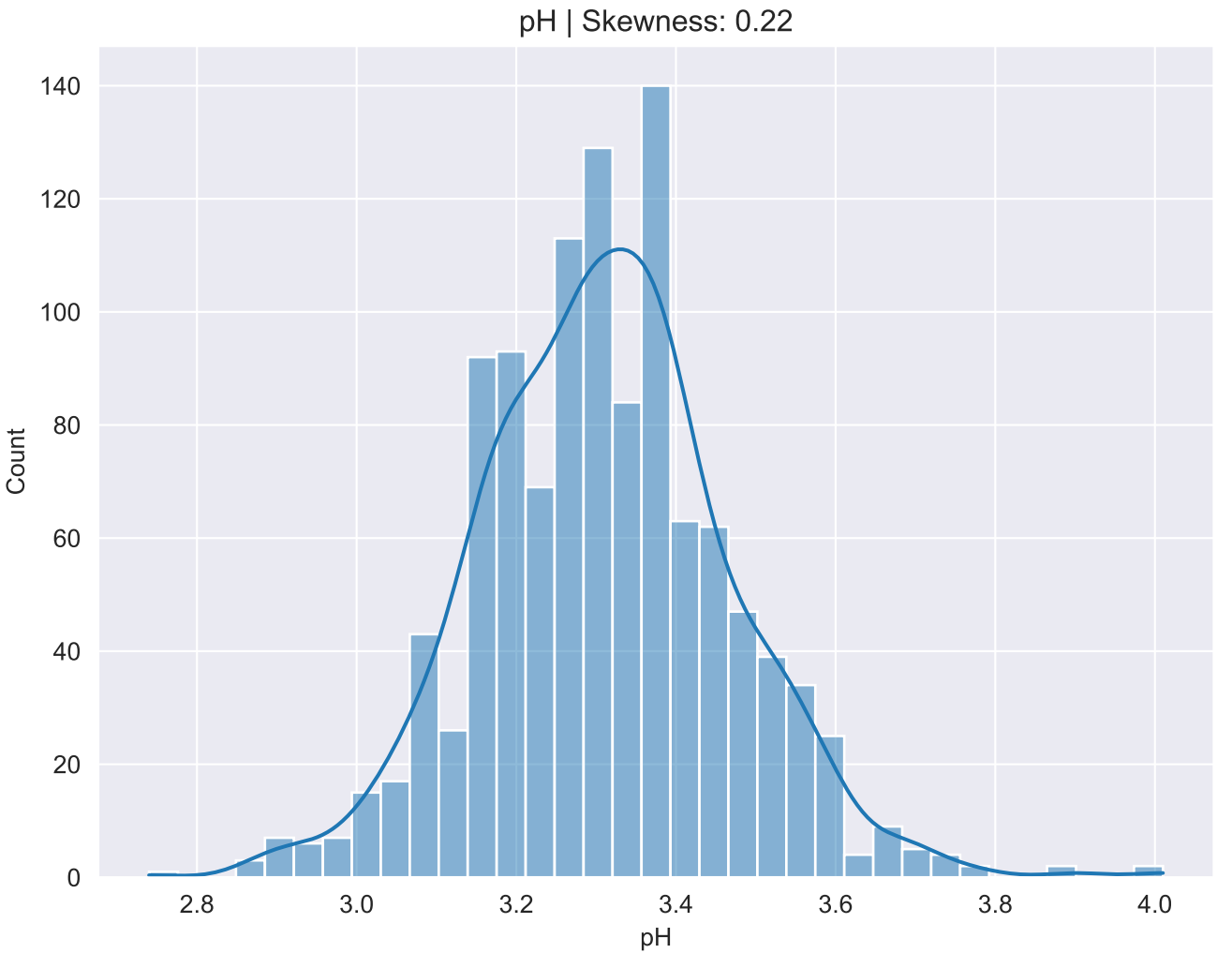

residual sugar | Skewness: 4.36
Count
residual sugar
0
25
50
75
100
125
150
175
200
2
4
6
8
10
12
14
16

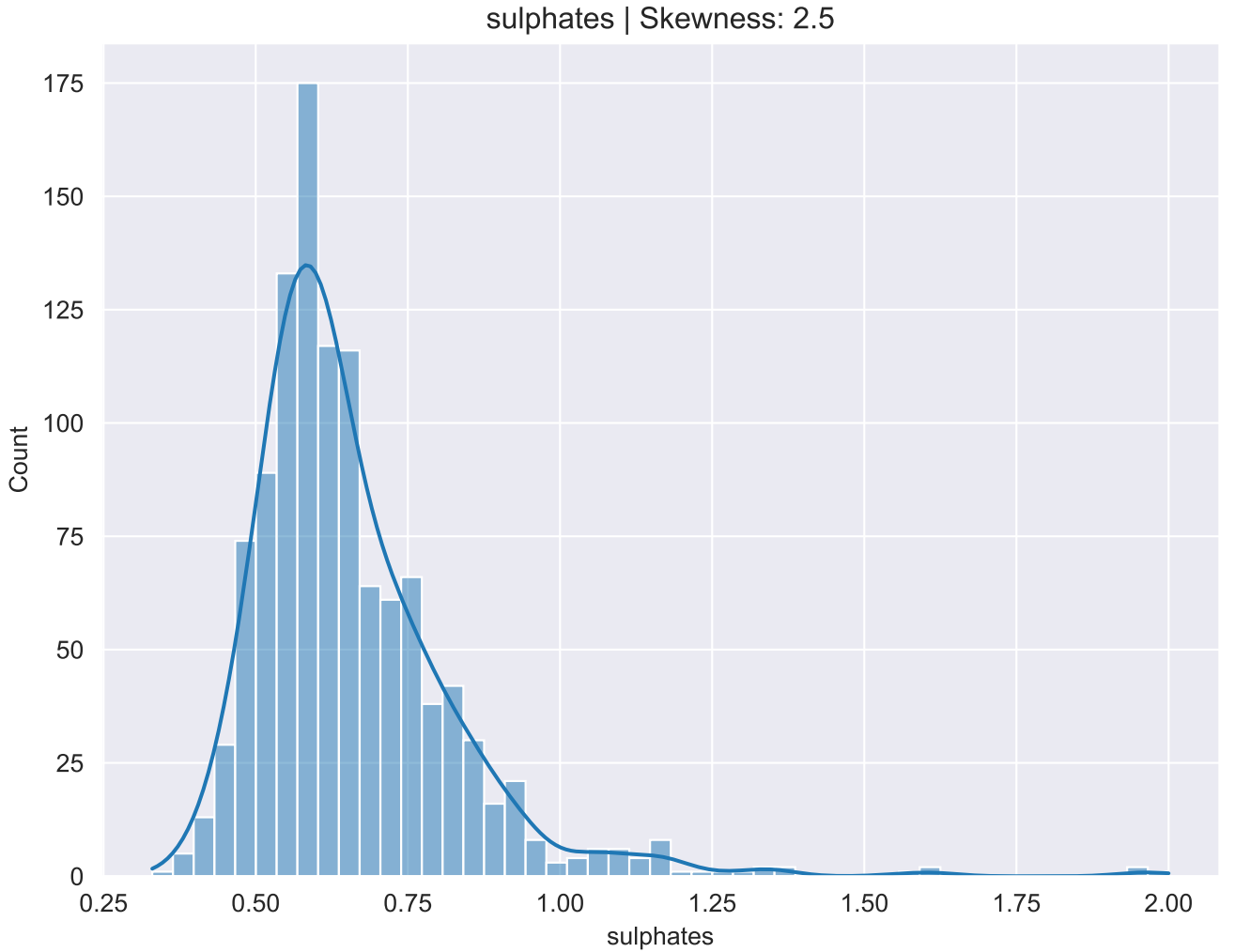

chlorides | Skewness: 6.03
Count
chlorides
0
20
40
60
80
100
120
140
160
0.0
0.1
0.2
0.3
0.4
0.5
0.6

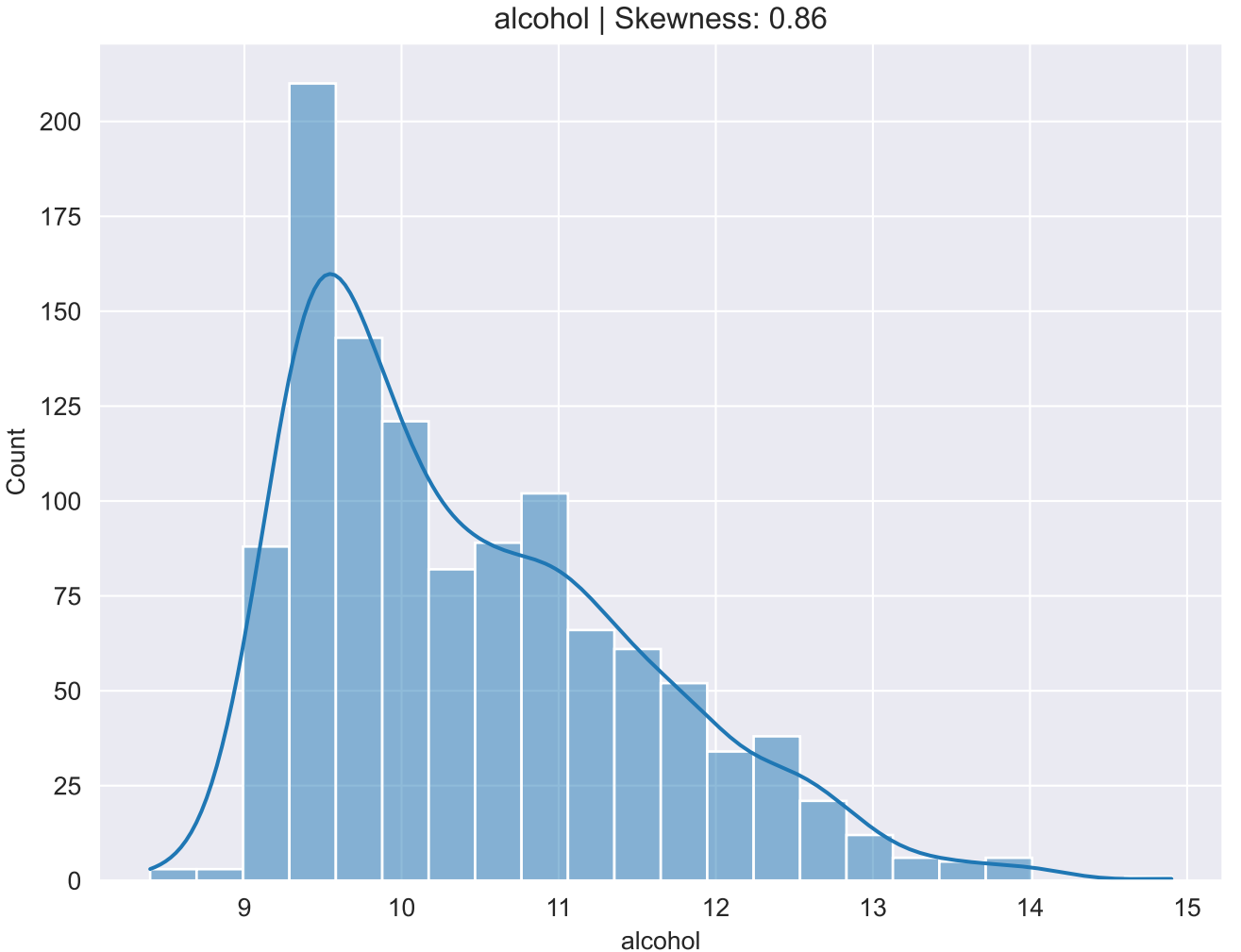

free sulfur dioxide | Skewness: 1.23
Count
0
25
50
75
100
125
150
175
200
0
10
20
30
40
50
60
70
free sulfur dioxide

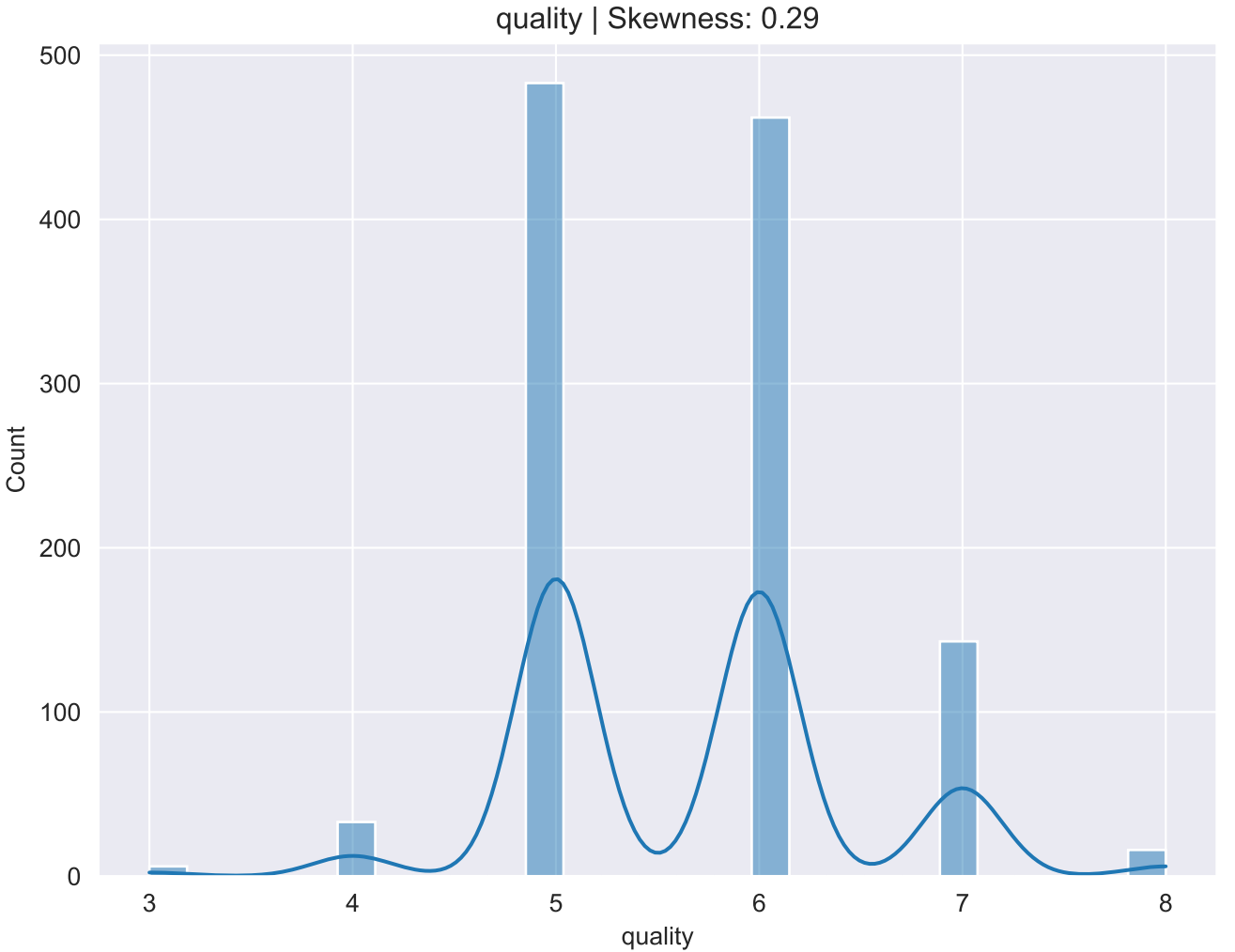

total sulfur dioxide | Skewness: 1.67
Count
200
175
150
125
100
75
50
25
0
0
50
100
150
200
250
300
total sulfur dioxide

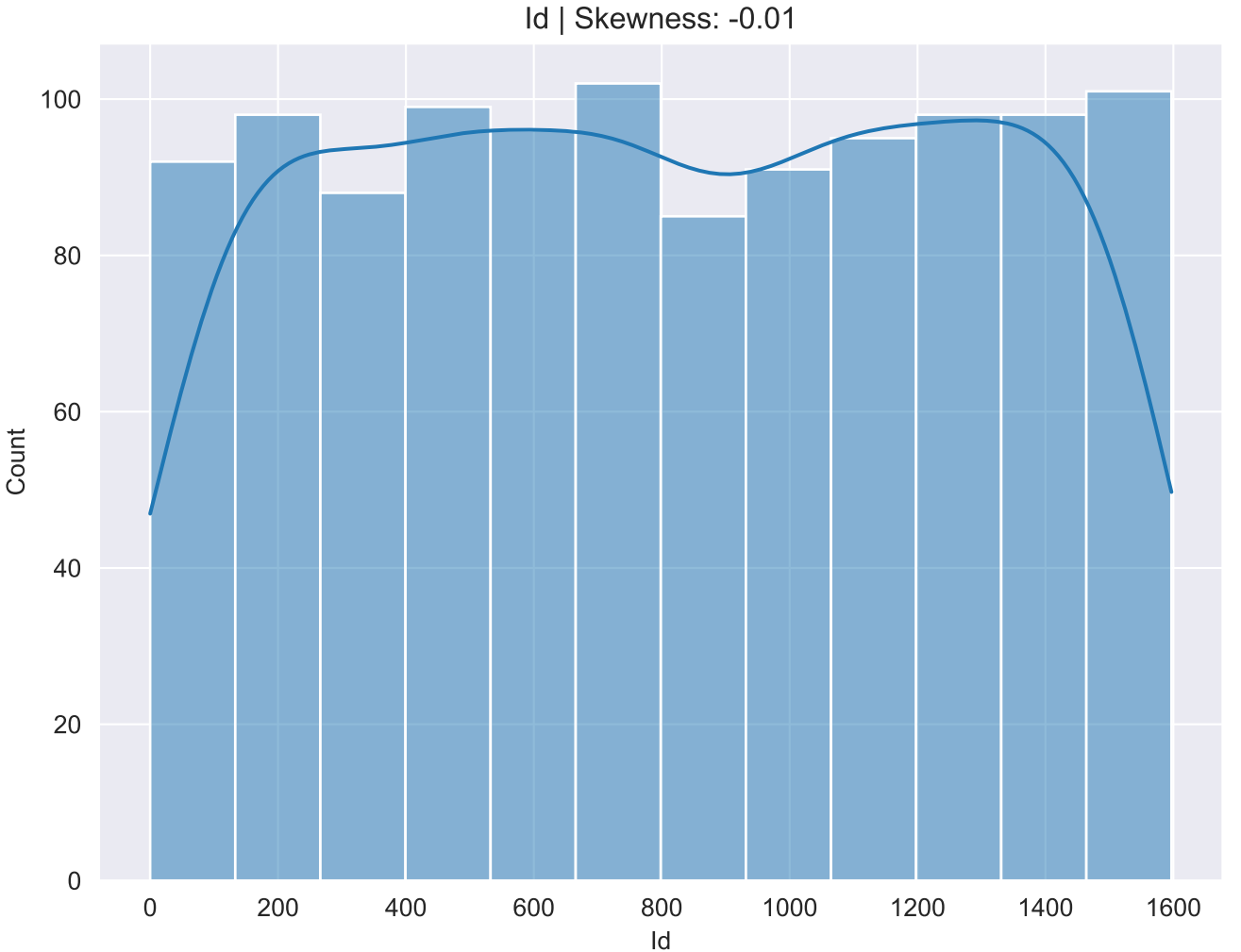

density | Skewness: 0.1
Count
0
20
40
60
80
100
120
0.990
0.992
0.994
0.996
0.998
1.000
1.002
1.004
density

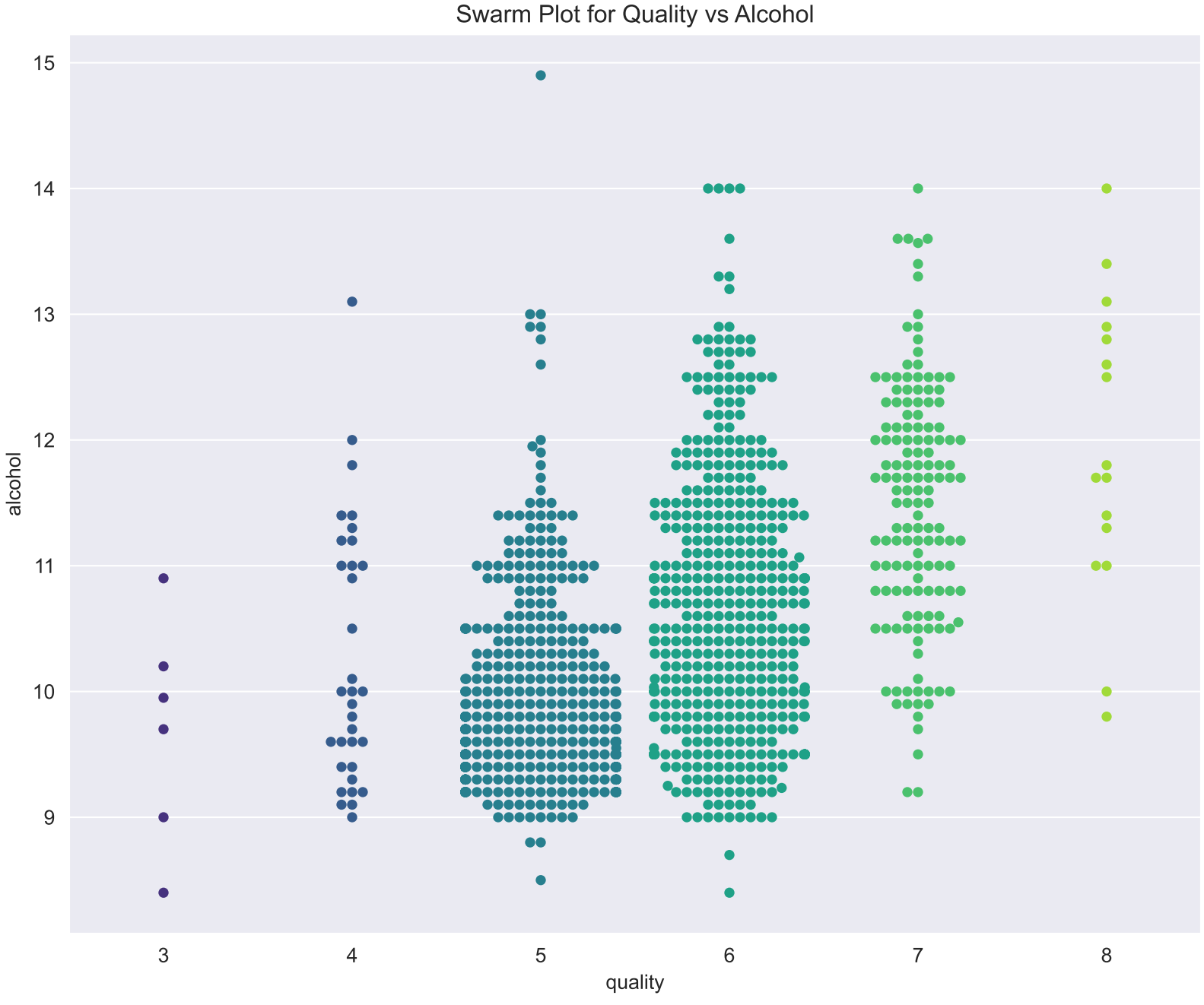

pH | Skewness: 0.22
Count
0
20
40
60
80
100
120
140
2.8
3.0
3.2
3.4
3.6
3.8
4.0
pH

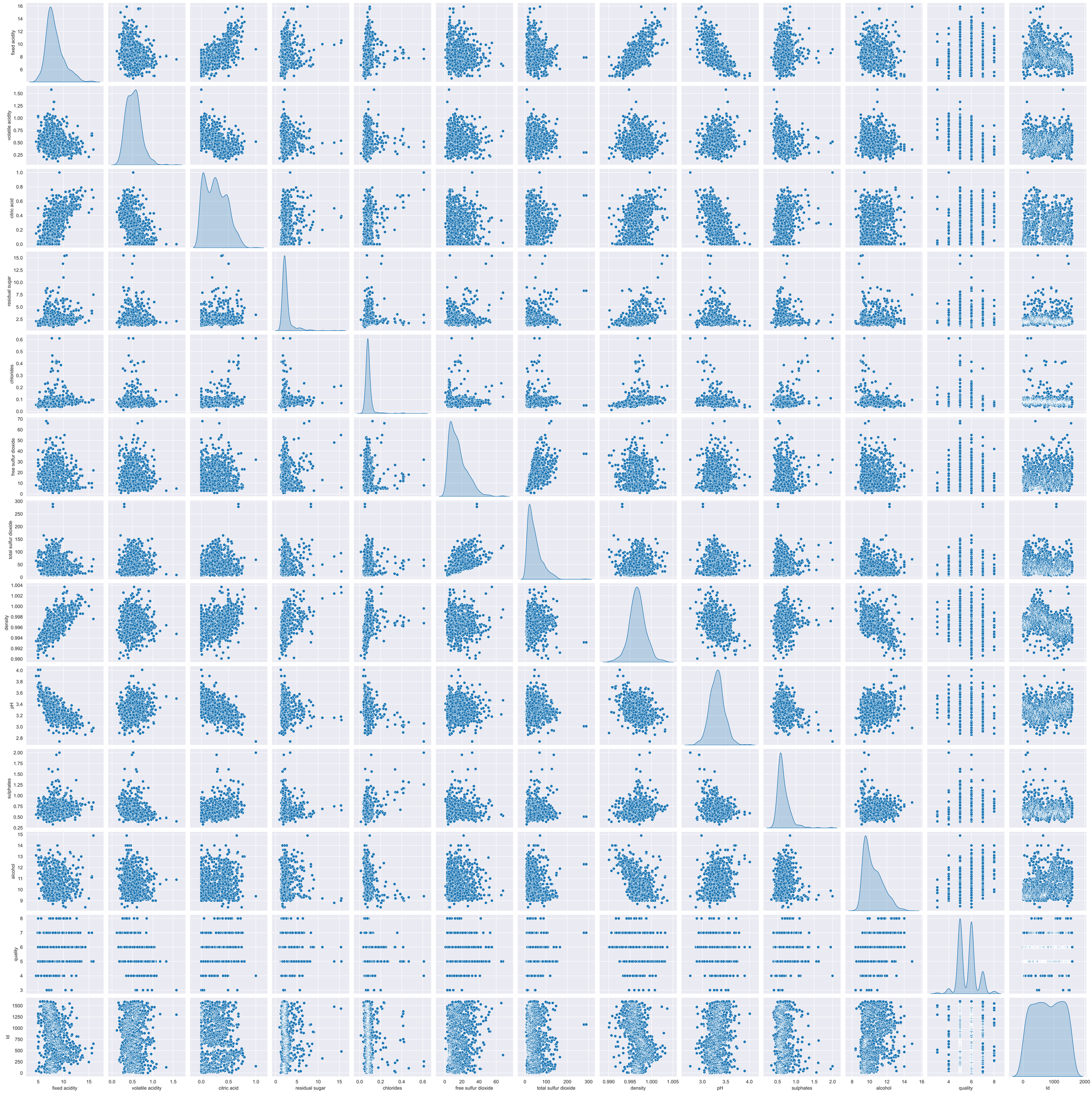

sulphates | Skewness: 2.5
Count
175
150
125
100
75
50
25
0
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
sulphates

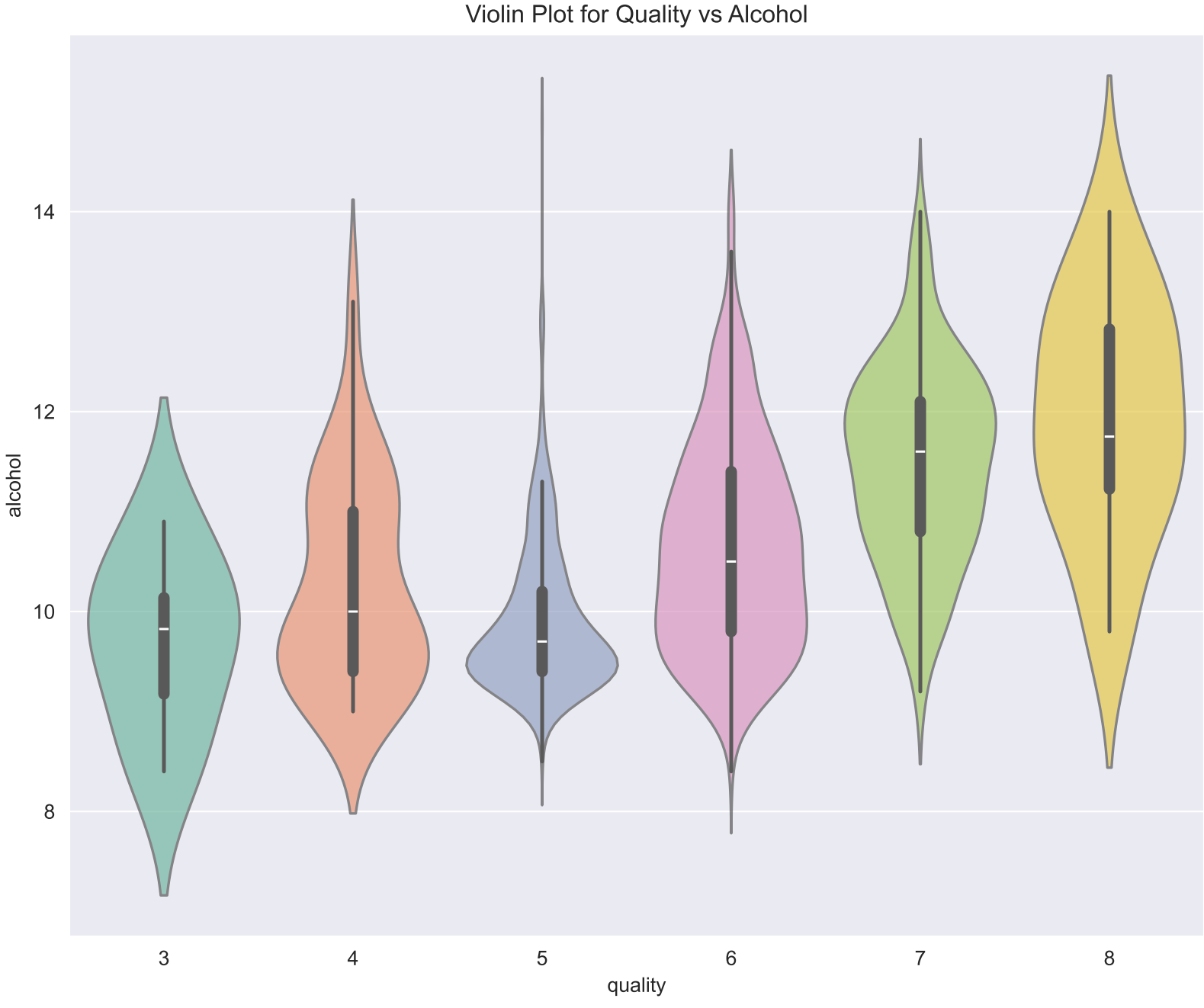

alcohol | Skewness: 0.86
Count
0
25
50
75
100
125
150
175
200
9
10
11
12
13
14
15
alcohol

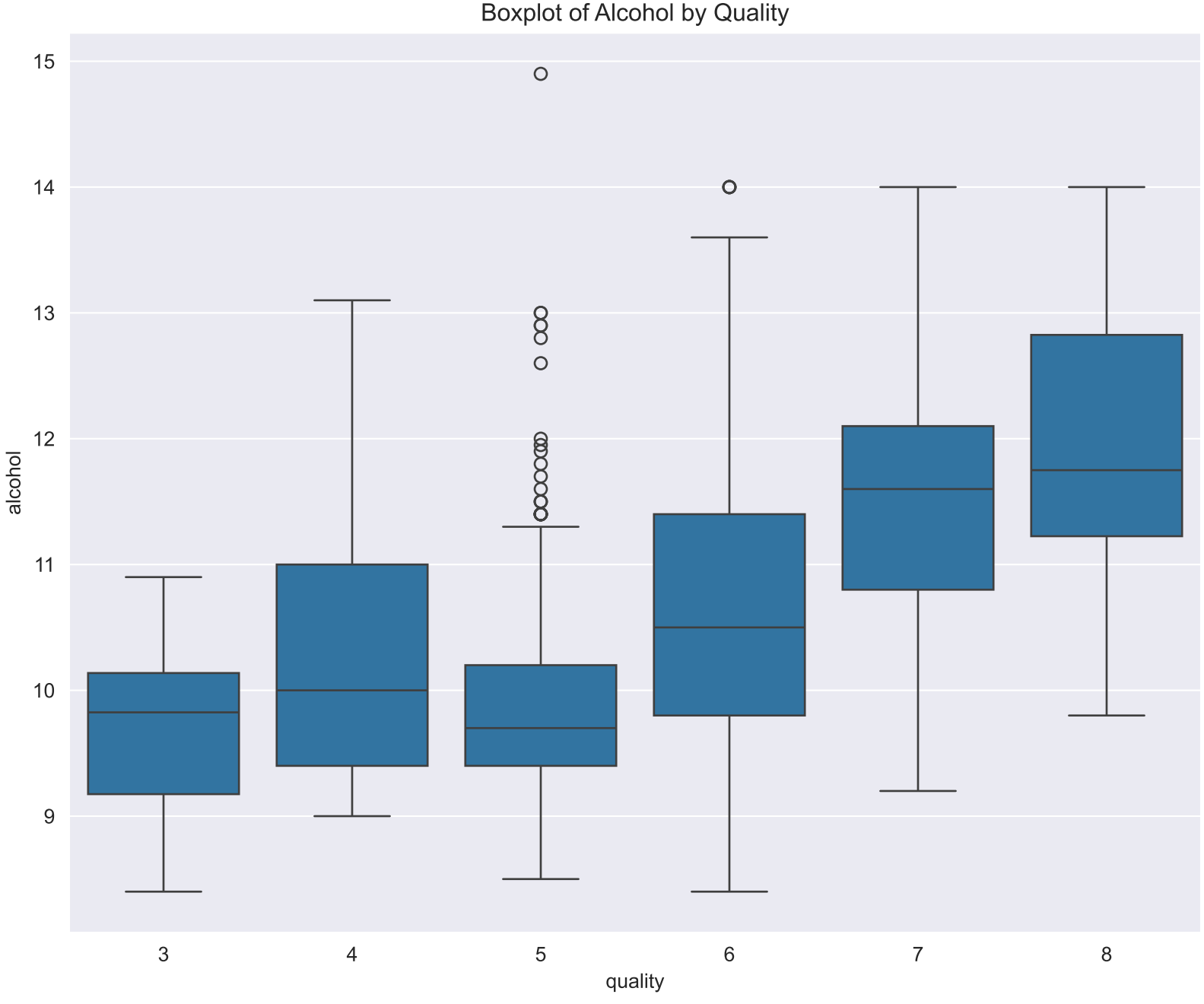

quality | Skewness: 0.29
500
400
300
200
100
0
Count
3
4
5
6
7
8
quality

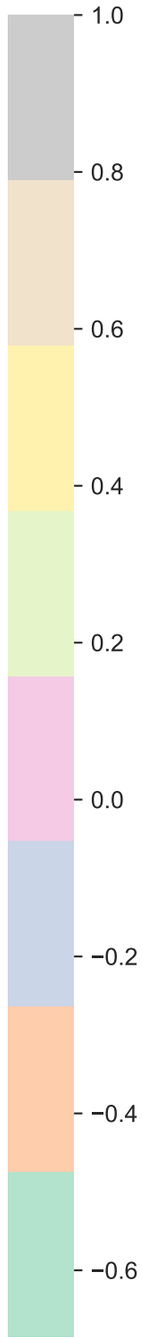

Id | Skewness: -0.01
Count
0
20
40
60
80
100
0
200
400
600
800
1000
1200
1400
1600
Id


Swarm Plot for Quality vs Alcohol
alcohol
15
14
13
12
11
10
9
3
4
5
6
7
8
quality


fixed acidity
volatile acidity
citric acid
residual sugar
chlorides
free sulfur dioxide
total sulfur dioxide
density
pH
sulphates
alcohol
quality
Id


Violin Plot for Quality vs Alcohol
alcohol
14
12
10
8
3
4
5
6
7
8
quality


Boxplot of Alcohol by Quality
alcohol
15
14
13
12
11
10
9
3
4
5
6
7
8
quality

Correlation Heatmap

	fixed acidity	volatile acidity	citric acid	residual sugar	chlorides	free sulfur dioxide	total sulfur dioxide	density	pH	sulphates	alcohol	quality	Id
fixed acidity	1.00	-0.25	0.67	0.17	0.11	-0.16	-0.11	0.68	-0.69	0.17	-0.08	0.12	-0.28
volatile acidity	-0.25	1.00	-0.54	-0.01	0.06	-0.00	0.08	0.02	0.22	-0.28	-0.20	-0.41	-0.01
citric acid	0.67	-0.54	1.00	0.18	0.25	-0.06	0.04	0.38	-0.55	0.33	0.11	0.24	-0.14
residual sugar	0.17	-0.01	0.18	1.00	0.07	0.17	0.19	0.38	-0.12	0.02	0.06	0.02	-0.05
chlorides	0.11	0.06	0.25	0.07	1.00	0.02	0.05	0.21	-0.28	0.37	-0.23	-0.12	-0.09
free sulfur dioxide	-0.16	-0.00	-0.06	0.17	0.02	1.00	0.66	-0.05	0.07	0.03	-0.05	-0.06	0.10
total sulfur dioxide	-0.11	0.08	0.04	0.19	0.05	0.66	1.00	0.05	-0.06	0.03	-0.19	-0.18	-0.11
density	0.68	0.02	0.38	0.38	0.21	-0.05	0.05	1.00	-0.35	0.14	-0.49	-0.18	-0.36
pH	-0.69	0.22	-0.55	-0.12	-0.28	0.07	-0.06	-0.35	1.00	-0.19	0.23	-0.05	0.13
sulphates	0.17	-0.28	0.33	0.02	0.37	0.03	0.03	0.14	-0.19	1.00	0.09	0.26	-0.10
alcohol	-0.08	-0.20	0.11	0.06	-0.23	-0.05	-0.19	-0.49	0.23	0.09	1.00	0.48	0.24
quality	0.12	-0.41	0.24	0.02	-0.12	-0.06	-0.18	-0.18	-0.05	0.26	0.48	1.00	0.07
Id	-0.28	-0.01	-0.14	-0.05	-0.09	0.10	-0.11	-0.36	0.13	-0.10	0.24	0.07	1.00