

```
In [ ]: from mylib.calculator import (
        load_dataset,
        grab_mean,
        grab_median,
        grab_max,
        grab_std,
        create_histogram,
    )

example_csv = "https://raw.githubusercontent.com/fivethirtyeight/data/master/drug-use-by-age/drug-use-by-age.csv"
```

```
In [ ]: df = load_dataset(example_csv)
assert df is not None
assert df.shape == (17,28), "The df is not right"
print(df.head)
```

<bound	method	NDFrame.head of	age	n	alcohol_use	alcohol_frequency	marijuana_use	\
0	12	2798	3.9	3.0	1.1			
1	13	2757	8.5	6.0	3.4			
2	14	2792	18.1	5.0	8.7			
3	15	2956	29.2	6.0	14.5			
4	16	3058	40.1	10.0	22.5			
5	17	3038	49.3	13.0	28.0			
6	18	2469	58.7	24.0	33.7			
7	19	2223	64.6	36.0	33.4			
8	20	2271	69.7	48.0	34.0			
9	21	2354	83.2	52.0	33.0			
10	22-23	4707	84.2	52.0	28.4			
11	24-25	4591	83.1	52.0	24.9			
12	26-29	2628	80.7	52.0	20.8			
13	30-34	2864	77.5	52.0	16.4			
14	35-49	7391	75.0	52.0	10.4			
15	50-64	3923	67.2	52.0	7.3			
16	65+	2448	49.3	52.0	1.2			

	marijuana_frequency	cocaine_use	cocaine_frequency	crack_use	\
0	4.0	0.1	5.0	0.0	
1	15.0	0.1	1.0	0.0	
2	24.0	0.1	5.5	0.0	
3	25.0	0.5	4.0	0.1	
4	30.0	1.0	7.0	0.0	
5	36.0	2.0	5.0	0.1	
6	52.0	3.2	5.0	0.4	
7	60.0	4.1	5.5	0.5	
8	60.0	4.9	8.0	0.6	
9	52.0	4.8	5.0	0.5	
10	52.0	4.5	5.0	0.5	
11	60.0	4.0	6.0	0.5	
12	52.0	3.2	5.0	0.4	
13	72.0	2.1	8.0	0.5	
14	48.0	1.5	15.0	0.5	
15	52.0	0.9	36.0	0.4	
16	36.0	0.0	-	0.0	

	crack_frequency	...	oxycontin_use	oxycontin_frequency	tranquilizer_use	\
0	-	...	0.1	24.5	0.2	
1	3.0	...	0.1	41.0	0.3	
2	-	...	0.4	4.5	0.9	
3	9.5	...	0.8	3.0	2.0	
4	1.0	...	1.1	4.0	2.4	
5	21.0	...	1.4	6.0	3.5	
6	10.0	...	1.7	7.0	4.9	
7	2.0	...	1.5	7.5	4.2	
8	5.0	...	1.7	12.0	5.4	
9	17.0	...	1.3	13.5	3.9	
10	5.0	...	1.7	17.5	4.4	
11	6.0	...	1.3	20.0	4.3	
12	6.0	...	1.2	13.5	4.2	
13	15.0	...	0.9	46.0	3.6	
14	48.0	...	0.3	12.0	1.9	
15	62.0	...	0.4	5.0	1.4	
16	-	...	0.0	-	0.2	

	tranquilizer_frequency	stimulant_use	stimulant_frequency	meth_use	\
0	52.0	0.2	2.0	0.0	
1	25.5	0.3	4.0	0.1	
2	5.0	0.8	12.0	0.1	
3	4.5	1.5	6.0	0.3	
4	11.0	1.8	9.5	0.3	
5	7.0	2.8	9.0	0.6	
6	12.0	3.0	8.0	0.5	
7	4.5	3.3	6.0	0.4	
8	10.0	4.0	12.0	0.9	
9	7.0	4.1	10.0	0.6	
10	12.0	3.6	10.0	0.6	
11	10.0	2.6	10.0	0.7	
12	10.0	2.3	7.0	0.6	
13	8.0	1.4	12.0	0.4	
14	6.0	0.6	24.0	0.2	
15	10.0	0.3	24.0	0.2	
16	5.0	0.0	364.0	0.0	

	meth_frequency	sedative_use	sedative_frequency
0	-	0.2	13.0
1	5.0	0.1	19.0
2	24.0	0.2	16.5
3	10.5	0.4	30.0
4	36.0	0.2	3.0
5	48.0	0.5	6.5
6	12.0	0.4	10.0
7	105.0	0.3	6.0
8	12.0	0.5	4.0
9	2.0	0.3	9.0
10	46.0	0.2	52.0
11	21.0	0.2	17.5
12	30.0	0.4	4.0
13	54.0	0.4	10.0
14	104.0	0.3	10.0
15	30.0	0.2	104.0
16	-	0.0	15.0

[17 rows x 28 columns]>

```
In [ ]: mean_test = grab_mean(df, "alcohol_use")
median_test = grab_median(df, "alcohol_use")
std_test = grab_std(df, "alcohol_use")
max_test = grab_max(df, "alcohol_use")
describe_test = df.describe()
assert describe_test.loc["mean", "alcohol_use"] == mean_test
assert describe_test.loc["std", "alcohol_use"] == std_test
assert describe_test.loc["50%", "alcohol_use"] == median_test
assert describe_test.loc["max", "alcohol_use"] == max_test
```

```
In [ ]: output_hist = create_histogram(load_dataset(example_csv), "alcohol_use")
assert output_hist is not None
```

