Cheatography

Statistics with Python Cheat Sheet

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Mean / Median

Mean = Average	**np.average**(*array*)
Median	**np.median**(*array*)
Mode	**stats.**mode(*array*)

Mean = Average
Median = Center of a dataset
Mode = Most common value in a dataset
-> (**from** *scipy* **import** *stats*)

Range

min	np.**amin**(data)
max	np.**amax**(data)
range	max - min

Variance

```
# Variance
-> Tells us how spread out the Data is
# Variance in numpy
variance = np.var(dataset)
# Build Variance from ground up example
grades = [88, 82, 85, 84, 90]
mean = np.mean(grades)
# When calculating these variables, square the difference.
difference_one = (88 - mean) ** 2
difference_two = (82 - mean) ** 2
difference_three = (85 - mean) ** 2
difference_four = (84 - mean) ** 2
difference_five = (90 - mean) ** 2
difference_sum = difference_one + ... + difference_five
variance = difference_sum / 5
```

Standard Deviation

```
# Standard Deviation in numpy
dataset = [4, 8, 15, 16, 23, 42]
standard_deviation = np.std(dataset)
```

Histogram

```
# Specify the Bin-Range
bin_range = (max_value - min_value + 1) / bins
# Histogram
times_hist = np.histogram(data, range = (0, 24), bins = 4)
```

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