

Timeseries example

October 1, 2018

1 Simple timeseries example

This example shows how to create a timeseries and plot it.

```
In [38]: # example of using python time
```

```
    from datetime import datetime, timedelta  
  
    print (datetime.now())
```

```
2018-10-01 11:43:38.942724
```

```
In [40]: # you can add durations to a timestamp
```

```
    print (datetime.now() + timedelta(minutes=10))
```

```
2018-10-01 11:53:54.040153
```

```
In [34]: # example of using python to generate random number
```

```
    import random  
  
    # the below generates a random number between 0 and 1.0  
    print (random.random())
```

```
0.407619760128886
```

```
In [35]: # to generate a number between 0 and 10
```

```
    print (random.random() * 10)
```

```
1.6997960252893407
```

```
In [45]: # now lets generate an array of samples spaced 1 minute appart
```

```
samples = []
times = []
time = datetime.now()

for i in range(20):
    value = random.random()*10
    time = time + timedelta(minutes=1)
    samples.append(value)
    times.append(time)

print(samples)
print(times)
```

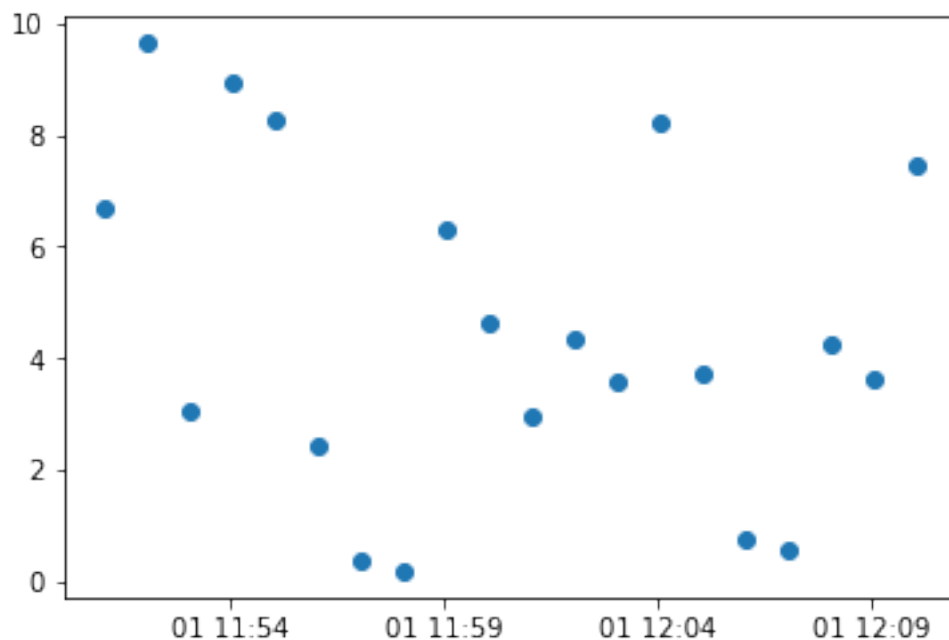
```
[6.670268571073609, 9.645207299909798, 3.074186771145798, 8.942206425994822, 8.276805616357759,
[datetime.datetime(2018, 10, 1, 11, 51, 3, 358814), datetime.datetime(2018, 10, 1, 11, 52, 3, 358814),
```

```
In [47]: # now, plot the samples using matplotlib
```

```
import matplotlib.pyplot as plt
%matplotlib inline

plt.plot_date(x=times, y=samples)
```

```
Out[47]: [<matplotlib.lines.Line2D at 0x7efdf29179b0>]
```



```
In [ ]:
```