ML

EP name A-se

1 _____

2

3

T SA

Regression   Amount / magnitude / value

21-03-22 ⟶

22-03-22

23-03-22

cols
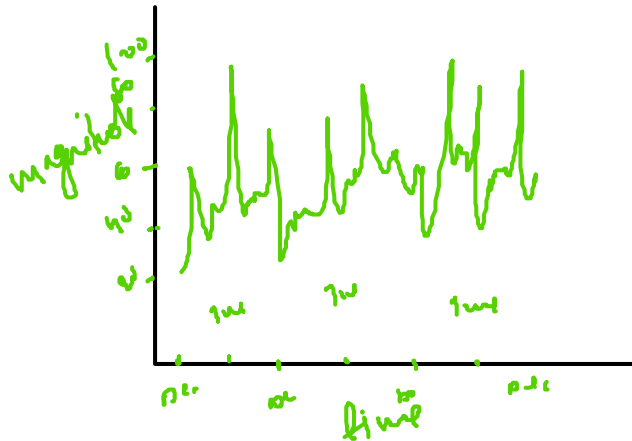
$-\begin{cases} \end{cases}$
20-03   12   - 1
21-03   11   - 1
22-03   15   - 2
24-03   10   - 1
25-03   9   - 2
27-03   12   - 1
28-03   11   - 1
29-03   13

Resample ↑↑ $\frac{2}{3}$ ↘↗

21-03 ⟶ 23
22-03 ⟶ 15
24-03 ⟶ 19
26-03 ⟶ 12
      ⟶ 24
28-03

2 days

weekly 80-100 Animal adoption

hourly 500

original data (str) ⟶ (datetime)   resample . sum ()
Date value   . mean ()

19   8   20 - 15
20   7   22 - 06
22   6   7 days   24 - 20

20   7
22   6
23   7   2 days
24   11   resample
26   8
27   7
28   16
30   12

22 - 06
24 - 26
26 - 08
28 - 17
30 - 12

(Sales) , (Amount)
 All   All

| mean ()

weather forecast
Temp

1 - 40 } 2 - 7]_2
2   37°
3   35°   2 - 38 5
4

2 day sale   Add +   mean ()

                                  Temp   37 5
1 - 30 } (45)   1 - 36 = 2 = 75°
2 - 15   ↑Add   2 - 40

                                  Amt
                                  1 - 88 } - 118
                                  2 - 30

daily → weekly, monthly

weekly → daily X

07-03-22 = 400   when you do resampling
                     lower interval to higher ✓
                     higher interval to lower X

01 0
02 0
03 0
04 0
05 0
7 400

id	Date	Age	policy
1	21-03	.	.
2	21-03	.	.
3	22-03	.	.
4	22-3	.	.
5	22-3	.	.
6	23-8	.	.
7	23-0	.	.
8	24-03	.	.
9	25-0	:	:
10	25-8	:	:

task ?

How many policies are there in a day ?

$\Rightarrow$

	no. of policies
21-02	02
22	03
23	02
24	01
25	02
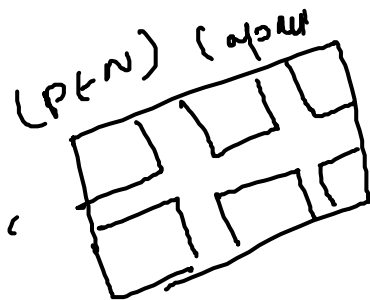
cats   adoptions   & relinquishment

(PEN) (ayout)

PEN →
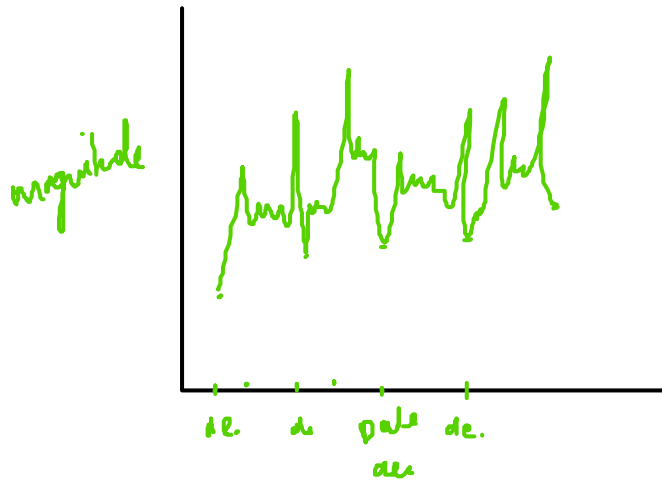
dip ⇒ lowest
peak ⇒ highest

Train −100 —
test 70 —
Valid 70 —

(72%) evaluation post dates

prediction/ solution ⇒ evaluate?
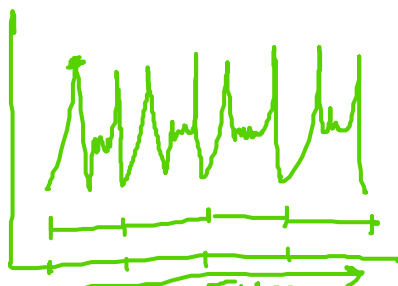
2 months minimal ⇒ wait

2 mows

Hi •

1) Trend

Uptrend

150
110
50

2020   2y   22

lower trend
downtrend

stationary / horizontal
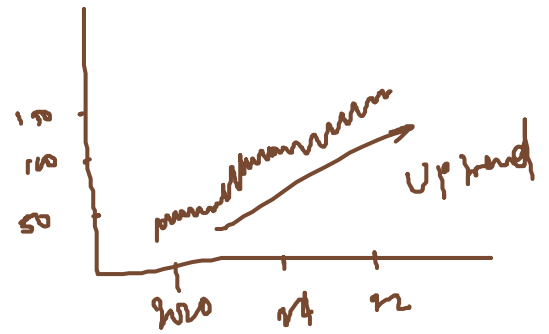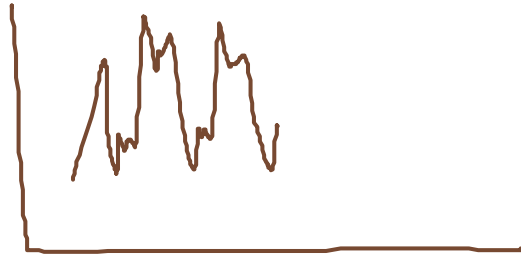
ex.   shop   . café

2008 - 2015

2) Seasonality

1 year ⟹ 3 { summer
              winter   } repititive → 1 year
              rainy   fixed period
                                          of time

5 yr.
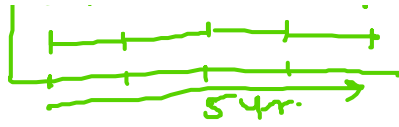
ex.   ice cream → Summer

umbrella/raincoat ⇒ rainy

Sweaters   ⇒ winter

Irregularity ⇒

Avg avoidvd   2 am woo   covid impact ⇒ irregularity
in covid
8 km
ino

short duration. → 4 j

ex. natural disaster, covid, war, flood, draught.

hi

Cyclic   12

Faming

\# Resample.
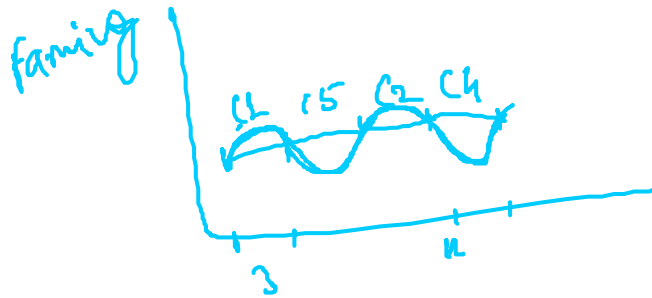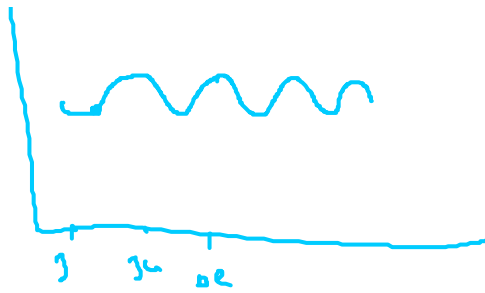
daily ⟶ 2D, 3D, week, month

weekly ✗ daily, 2,3 hr.

Comp. data =   hrly

daily

hi

to tune the model $\Rightarrow$ p, d, q

af

dale target

p, d, q
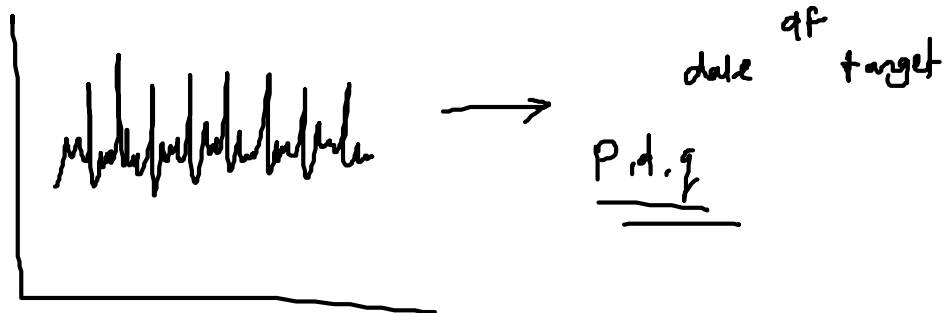
$\nearrow$ If af is stationary

② If af is not stationary

af target $\boxed{FL}$ $\rightarrow$ p, d, q

$\#$ of
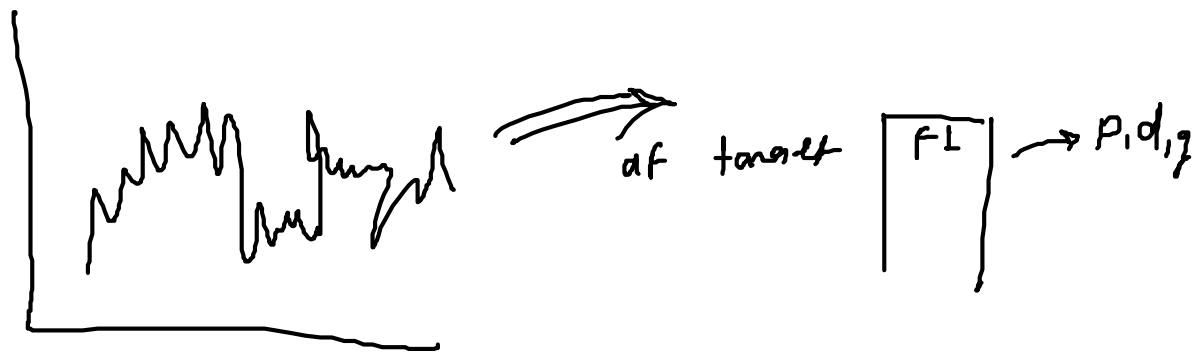
2)	-	100
n2		100
23		"
24		"
25		"
24		"

values are constant

# of	4	12
	n2	15
	m3	10
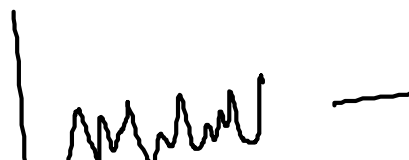
χ_1	
χ_2	15
χ_3	10
χ_4	15
χ_5	12
χ_6	10
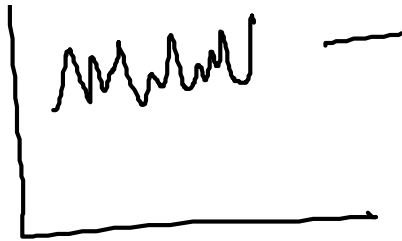
H_0 : Null hypothesis $\longrightarrow$ Assumption $\longrightarrow$ Data is non-stationary
  P value > 0.05

H_a : Alternate hypothesis $\longrightarrow$ Data is stationary
  P value $< 0.05 \Rightarrow$ evidence

1) Pval $= 0.5$ $\Rightarrow$ non-stationary
2) Pval $= 0.06$ $\Rightarrow$ non-station
3) Pv $= 0.04$ $\Rightarrow$ stationary

Case ①

$\underline{\underline{H_0}} =$ Accept
  Pvalue > 0.05

$H_a =$

Case ② H_0
  $=$ Pvalue < 0.05
$\underline{\underline{H_a}} =$ Accept

$H_0 \Rightarrow$ Null hypo $\Rightarrow$ non-stationary
  Pvalue > 0.05

$H_a \Rightarrow$ Alter hypo $\Rightarrow$ Stationary

accept $\nwarrow$ P value < 0.05

ADCF $\Rightarrow$ critical
pval $\longrightarrow$
tut statistic

hi