NYU | STERN

(TECHNICAL)
TECH-GB.2336
Tues. 6:00 PM – 9:00 PM

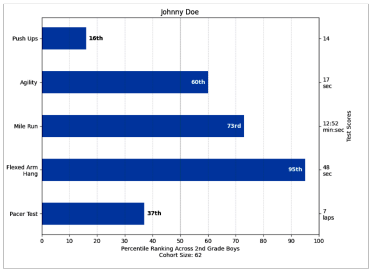
Mini-quiz

You may find this self-graded quiz helpful in calibrating your preparedness for this class. This is

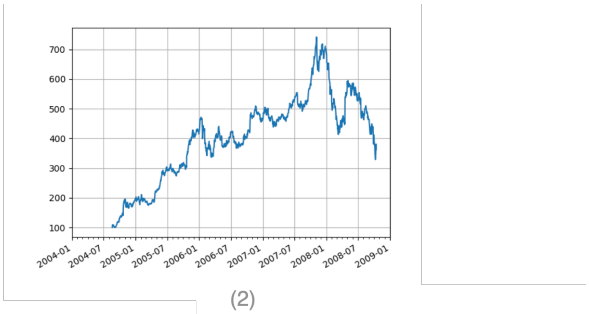
- optional
- for your own use only
- not to be handed in
- will not be grades.

There are a total of 15 points on this test. A reasonable score is above 12 points, provided that you think would have gotten full credit for the python coding question.

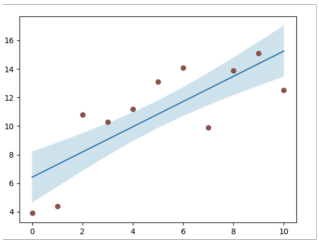
Part 1: I would know how to interpret these figures (3.5 points)



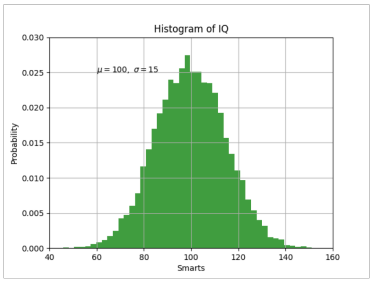
(1)



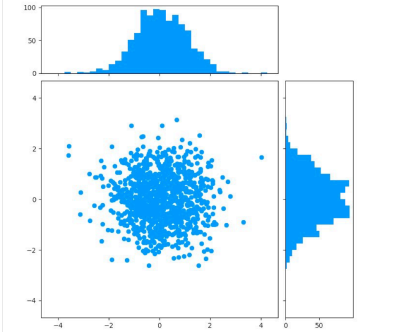
(2)



(3)



(4)



(5)

Points on Part 1	
(1) _____	out of 0.5
(2) _____	out of 0.5
(3) _____	out of 1.5
(4) _____	out of 0.5
(5) _____	out of 0.5
A: Total points ____	

Part 2: I understand these problems and would know how to solve them (3.5 points)

Let's imagine you are given a bag of marbles, with each marble being colored either red, blue or green in the following proportions:

$$p_{red} = 0.5; \quad p_{blue} = 0.3; \quad p_{green} = 0.2$$

(5) If you reached into the bag, and pulled out a single marble, **what is the probability that it would be green or blue?**

(6) If you reached into the bag, and pulled out a marble, looked at it, and put it back; then pulled out a second marble and looked at it, **what is the probability that you would have picked a red marble followed by a green marble?**

(7) If you reached into the bag, and pulled out a marble, looked at it, and did not put it back; then pulled out a second marble and looked at it, **what is the probability that you would have picked a green marble followed by a red marble?**

(8) If you reached into the bag, and pulled out a marble and showed it to me without yourself looking at it, and I told you it was not blue, **what is the probability that the marble you picked is green?**

Points on Part 2

(5) _____ out of 0.5

(6) _____ out of 1.0

(7) _____ out of 1.0

(8) _____ out of 1.0

B: Total points _____

Part 3: I understand the code and would know how to answer these questions (3 points)

(9) Write a snippet of Python code to removes periods, commas and exclamation marks from a string or a list of strings.

```
"""
Removes commas, periods and exclamation marks from the string s. Returns a NEW
string with the punctuation removed
>>> print(remove_punctuation("I hate cats, I really do!"))
>>> I hate cats I really do

"""
def remove_punctuation(s):
  #YOUR CODE HERE
```

(10) Find the 2 errors in this python code snippet. Feel free to run if needed

```
# function definition

def chunks(l, n):
  """Returns  successive n-sized chunks from l."""
  chunks = []
  for i in range(0, len(l)-1, n):
    chunks.append(l[i:i + n+1])
  return chunks
```

Points on Part 3
(9) _____ out of 1.5
(10) _____ out of 1.5
C: Total points _____

Part 4: I understand this output and would know how to answer the questions (5 points)

```
                            OLS Regression Results
==============================================================================
Dep. Variable:                  GRADE   R-squared:                       0.416
Model:                            OLS   Adj. R-squared:                  0.353
Method:                 Least Squares   F-statistic:                     6.646
Date:                Wed, 02 Feb 2022   Prob (F-statistic):            0.00157
Time:                        05:24:23   Log-Likelihood:                -12.978
No. Observations:                  32   AIC:                             33.96
Df Residuals:                      28   BIC:                             39.82
Df Model:                           3
Covariance Type:            nonrobust
==============================================================================
                 coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------
GPA            0.4639      0.162      2.864      0.008       0.132       0.796
SAT            0.0105      0.019      0.539      0.594      -0.029       0.050
EXTC           0.3786      0.139      2.720      0.011       0.093       0.664
const         -1.4980      0.524     -2.859      0.008      -2.571      -0.425
==============================================================================
```

(11) What percentage of the variance in GRADE is explained by the model described above?

(12) Which variable seems to have the least to do with the value of GRADE in this model?

(13) If two records. A and B, have identical values for all variables, except for GPA, and the value of GPA for A = 3.0, while the value of GPA for B = 4.0, how much higher would A's value of GRADE be than B's value of GRADE, under this model?

Points on Part 4
(13) _____ out of 1.5
(14) _____ out of 1.5
(15) _____ out of 2.0
D: Total points _____

Total score (A + B + C + D)

Mini-quiz total points _____ out of 15