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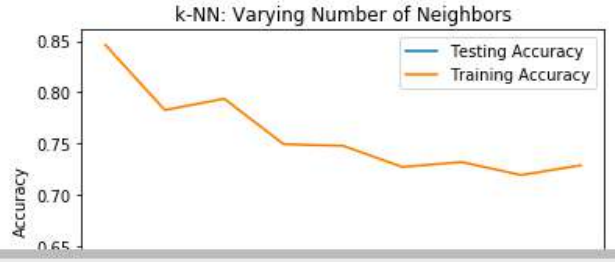
IE598_F19_HW2.ip...	a minute ago

IE598_F19_HW1.ipynb IE598_F19_HW2.ipynb

Code Python 3

```
Assignment 2 - 09/08/2019

# DATA SCREENING

(900, 12)
(900, 10)
(900,)
(900, 9)
(630, 9) (630,)

# 1ST MODEL: k-NN CLASSIFIER

k Accuracy (Train) Accuracy (Test)
1        0.846          0.544
2        0.783          0.607
3        0.794          0.589
4        0.749          0.607
5        0.748          0.589
6        0.727          0.604
7        0.732          0.578
8        0.719          0.585
9        0.729          0.6

Values of k and maximum accuracy in the test sample are:
[4.         0.60740741]
```



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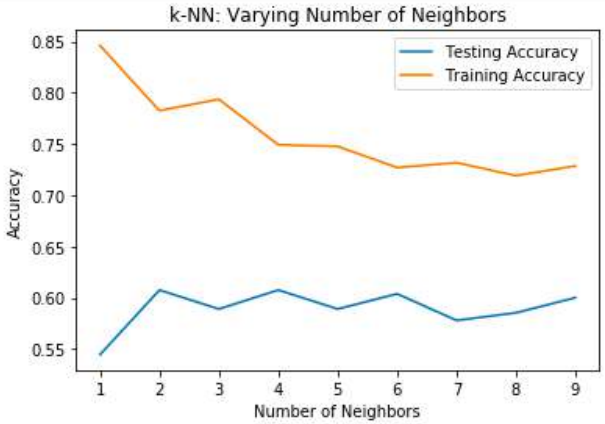
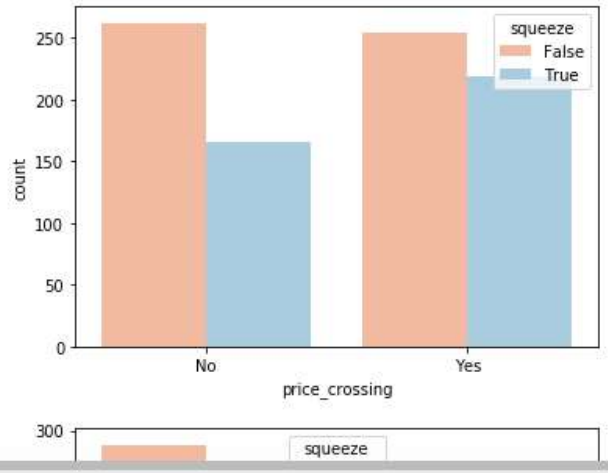
IE598_F19_HW1.ipynb | IE598_F19_HW2.ipynb

Code

Python 3




```
# 2ND MODEL: DECISION TREE CLASSIFIER
```



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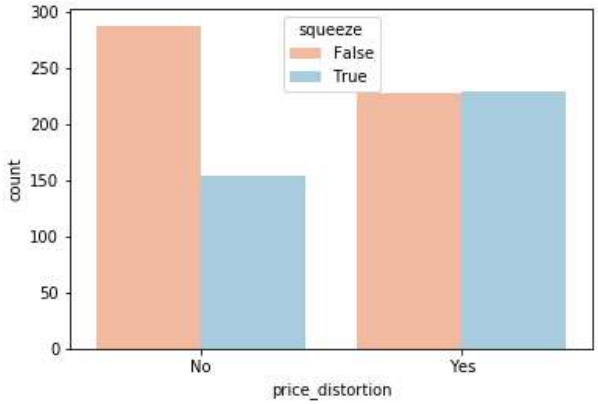
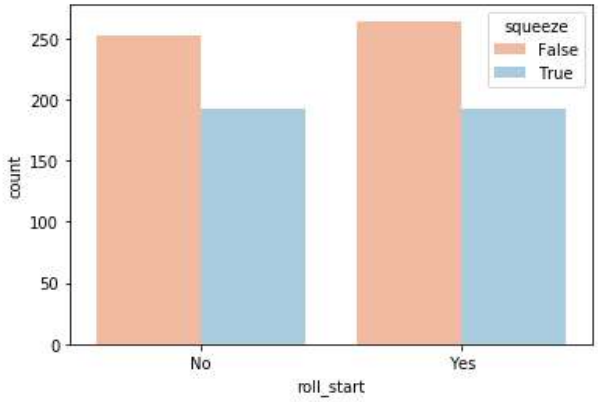
IE598_F19_HW2.ip...	2 minutes ago

IE598_F19_HW1.ipynb IE598_F19_HW2.ipynb

Code Python 3

price_crossing





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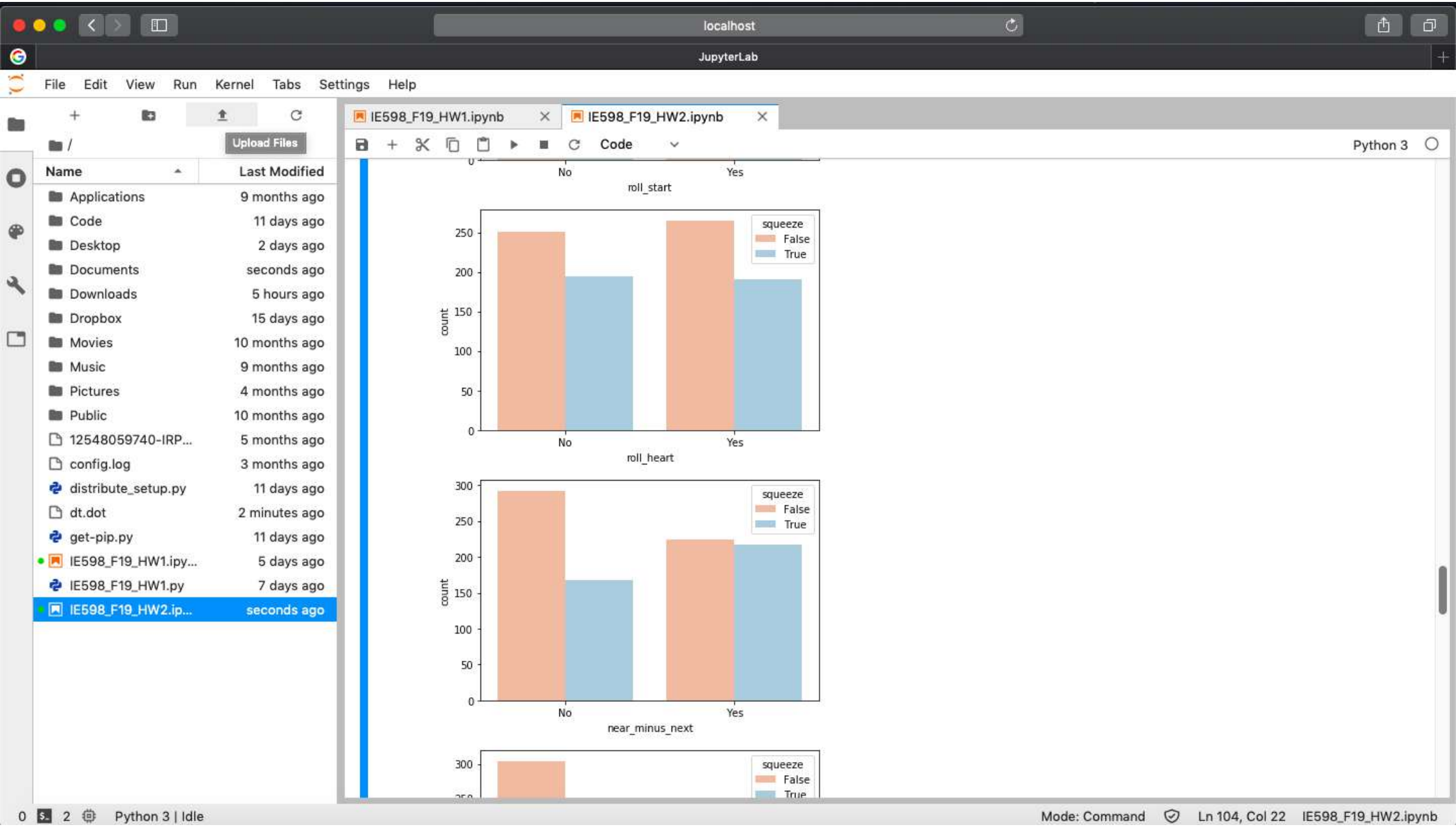
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IE598_F19_HW2.ip... seconds ago
IE598_F19_HW1.ipynb
IE598_F19_HW2.ipynb
Code
Python 3
No
Yes
roll_start
squeeze
False
True
count
0
50
100
150
200
250
roll_heart
300
near_minus_next
0 2 Python 3 | Idle
Mode: Command
Ln 104, Col 22
IE598_F19_HW2.ipynb

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IE598_F19_HW2.ip...	seconds ago

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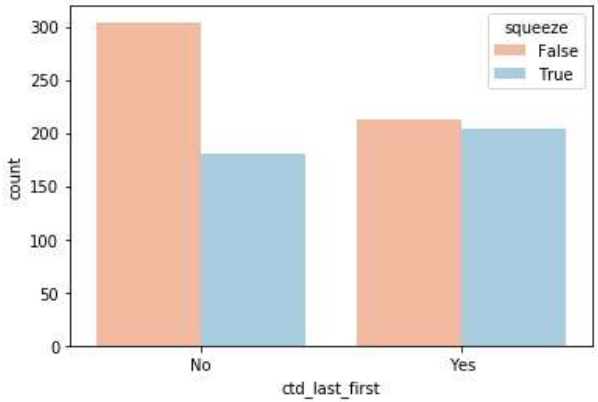
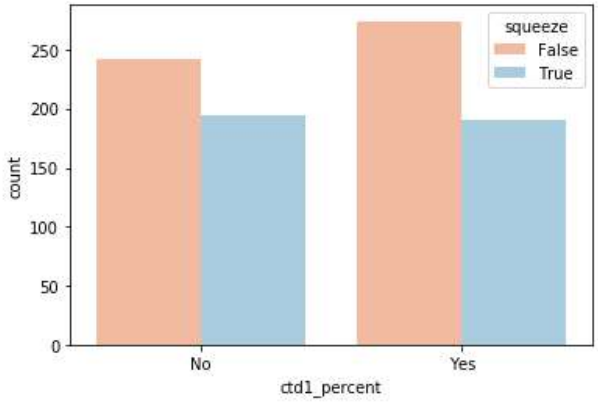
IE598_F19_HW1.ipynb IE598_F19_HW2.ipynb

Code Python 3

near_minus_next





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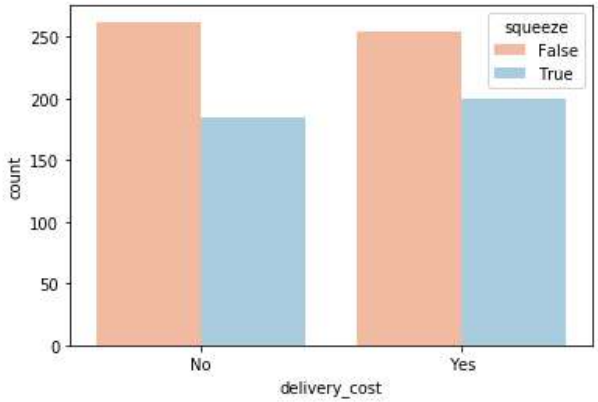
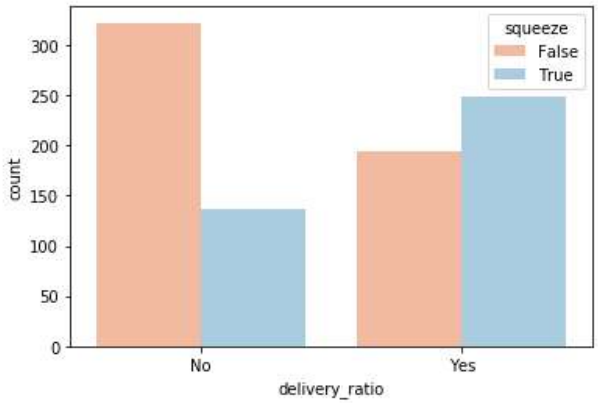
IE598_F19_HW1.py	7 days ago
IE598_F19_HW2.ip...	seconds ago

Code

IE598_F19_HW1.ipynb IE598_F19_HW2.ipynb

Code Python 3






```
Max_Depth Accuracy (Test)
    1          0.674
    2          0.622
    3          0.667
```

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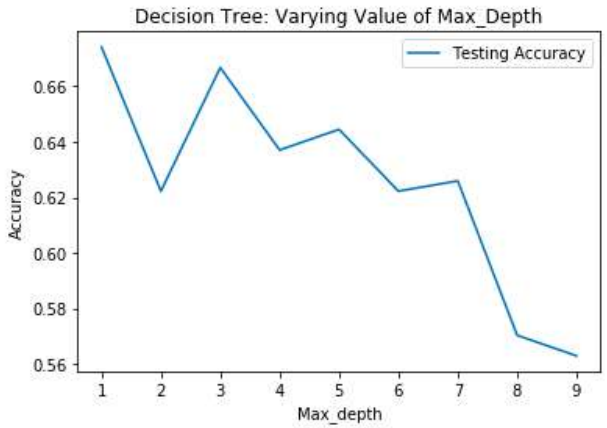
IE598_F19_HW2.ip...	a minute ago

IE598_F19_HW1.ipynb | IE598_F19_HW2.ipynb

Code | Python 3

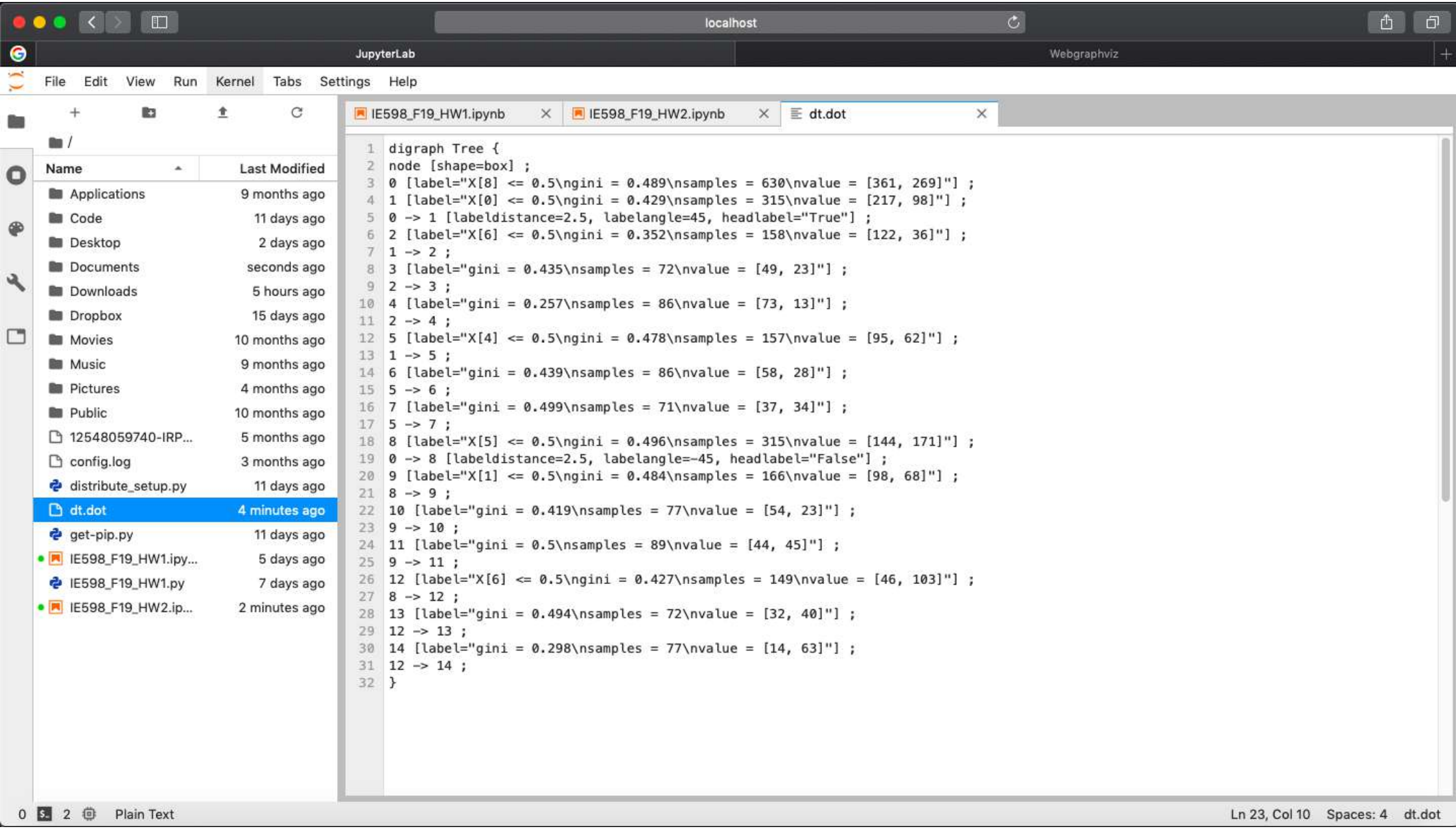
```
Max_Depth Accuracy (Test)
    1          0.674
    2          0.622
    3          0.667
    4          0.637
    5          0.644
    6          0.622
    7          0.626
    8          0.57
    9          0.563
```




```
My name is: Carolina Carvalho Manhaes Leite
My NetID is: leite2
I hereby certify that I have read the University policy on Academic Integrity and that I am not in violation.
```

[ ]:

0 2 Python 3 | Idle Mode: Command Ln 104, Col 22 IE598_F19_HW2.ipynb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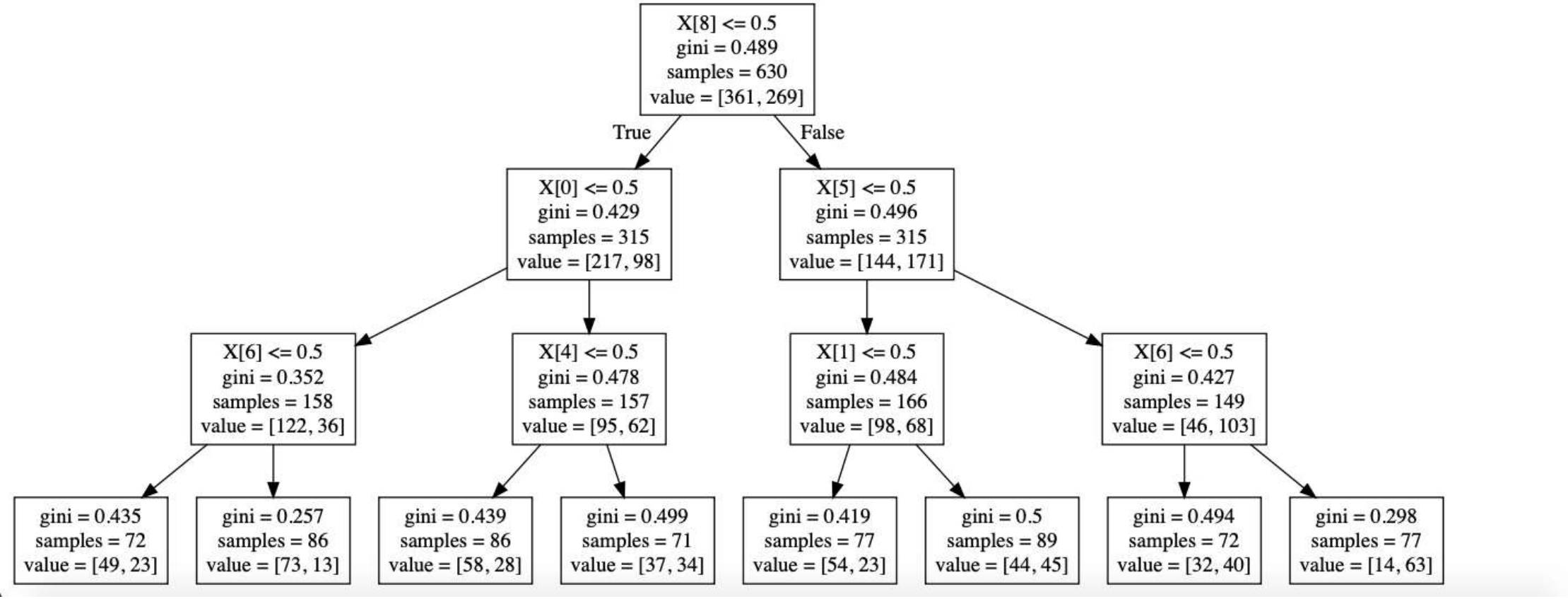
dt.dot 4 minutes ago
get-pip.py 11 days ago
IE598_F19_HW1.ipy... 5 days ago
IE598_F19_HW1.py 7 days ago
IE598_F19_HW2.ip... 2 minutes ago
IE598_F19_HW1.ipynb
IE598_F19_HW2.ipynb
dt.dot
digraph Tree {
node [shape=box] ;
0 [label="X[8] <= 0.5\ngini = 0.489\nsamples = 630\nvalue = [361, 269]"] ;
1 [label="X[0] <= 0.5\ngini = 0.429\nsamples = 315\nvalue = [217, 98]"] ;
0 -> 1 [labeldistance=2.5, labelangle=45, headlabel="True"] ;
2 [label="X[6] <= 0.5\ngini = 0.352\nsamples = 158\nvalue = [122, 36]"] ;
1 -> 2 ;
3 [label="gini = 0.435\nsamples = 72\nvalue = [49, 23]"] ;
2 -> 3 ;
4 [label="gini = 0.257\nsamples = 86\nvalue = [73, 13]"] ;
2 -> 4 ;
5 [label="X[4] <= 0.5\ngini = 0.478\nsamples = 157\nvalue = [95, 62]"] ;
1 -> 5 ;
6 [label="gini = 0.439\nsamples = 86\nvalue = [58, 28]"] ;
5 -> 6 ;
7 [label="gini = 0.499\nsamples = 71\nvalue = [37, 34]"] ;
5 -> 7 ;
8 [label="X[5] <= 0.5\ngini = 0.496\nsamples = 315\nvalue = [144, 171]"] ;
0 -> 8 [labeldistance=2.5, labelangle=-45, headlabel="False"] ;
9 [label="X[1] <= 0.5\ngini = 0.484\nsamples = 166\nvalue = [98, 68]"] ;
8 -> 9 ;
10 [label="gini = 0.419\nsamples = 77\nvalue = [54, 23]"] ;
9 -> 10 ;
11 [label="gini = 0.5\nsamples = 89\nvalue = [44, 45]"] ;
9 -> 11 ;
12 [label="X[6] <= 0.5\ngini = 0.427\nsamples = 149\nvalue = [46, 103]"] ;
8 -> 12 ;
13 [label="gini = 0.494\nsamples = 72\nvalue = [32, 40]"] ;
12 -> 13 ;
14 [label="gini = 0.298\nsamples = 77\nvalue = [14, 63]"] ;
12 -> 14 ;
}
0 2 Plain Text
Ln 23, Col 10 Spaces: 4 dt.dot

Not Secure — webgraphviz.com

JupyterLab | Webgraphviz

```
11 [label="gini = 0.5\nsamples = 89\nvalue = [44, 45]"] ;
9 -> 11 ;
12 [label="X[6] <= 0.5\ngini = 0.427\nsamples = 149\nvalue = [46, 103]"] ;
8 -> 12 ;
13 [label="gini = 0.494\nsamples = 72\nvalue = [32, 40]"] ;
12 -> 13 ;
14 [label="gini = 0.298\nsamples = 77\nvalue = [14, 63]"] ;
12 -> 14 ;
}
```

Generate Graph!



https://github.com/leiteccml/Carolina_2019