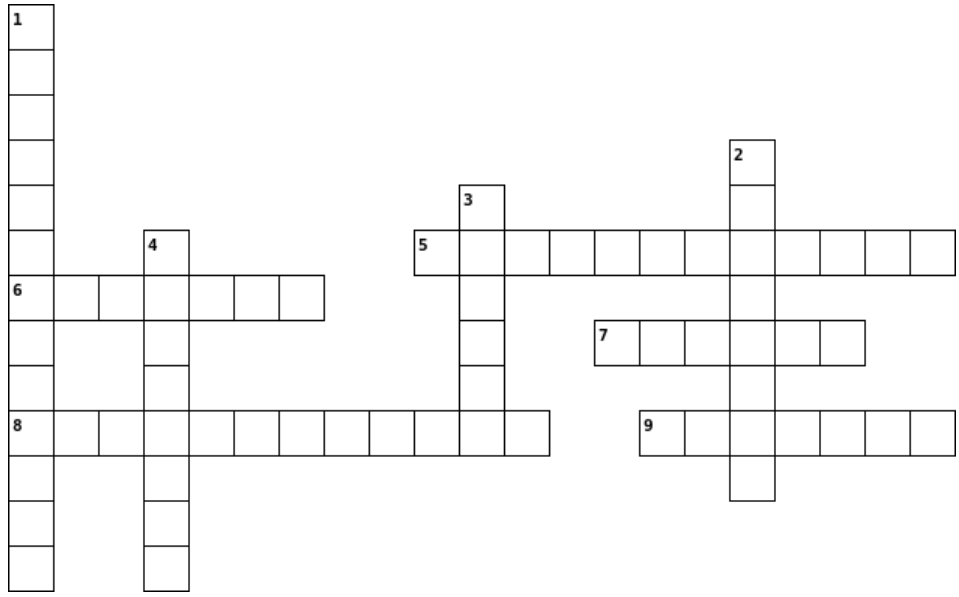
Data Science Quiz

1)Decison Tree 4)Moby Dock 6)Oktocat 8)RandomForest

2)Elephant 5)larry the bird 7)Python 9)Storage

Question 1

Zoology and Botany in Data Science *(hint:ignore whitespaces in words)* *(9 points)*



Down

1. Are prone to overfitting

2. Has a memory like Postgres

3. Have six fingers

4. Friendly marine mammal that carries containers

Across

5. Microblogging mountain bluebird named after basketball legend

6. Feline with 8 branches

7. Nonvenomous ambush predator

8. If you spill a basket of acorns, you get this

9. Data management the natural way

Question 2

Find 10 bugs: *(10 points)*

```
for year in range(1890, 2015, 1):
    total = 0
    filename = 'names\yob{year}.txt'
    for line in open(filename, 'w'):
        columns == line.split(',').strip()
total =+ columns[2]

print("Result: {} births total".format(year))
```

Question 3

What do the following bash commands do? *(6 points)*

`ls -a`	to show hidden folder
`sudo rm -rf /`	remove of file forcefully
`chmod 700 *`	permission read, write, execute for just only owner user
`grep print *.py | wc -l`	print all of the .py documents and then count number of total lines

Question 4

Write an SQL query that extracts the 10 most frequently occurring items in the *'subject'* column from the table *'data_scientists'*, but only consider students with the column *'python'* being 1 or higher. Output results in descending order. *(10 points)*

Select subject, count(*) from data_scientist where phyton>=1 group by subject order by count desc limit 10 ;

Question 5

Name the functions. *(9 points)*

$P(A\|B)=\frac{P(B\|A)P(A)}{P(B)}$	Naive Bayes
$\frac{1}{N}\sum_i (y_i - y_i^{true})^2 + \lambda \sum_j b_j^2$	Ridge Regression
$\frac{1}{1+e^{-x}}$	Sigmoid function

Question 6

Write 2 items you could import from each Python module. *(10 points)*

`pandas`	`DataFrame`
`random`	random.seed,randrange
`numpy`	array,random
`seaborn`	skatterplot,loaddataset
`os`	os.listdir(path='.'),os.link(src, dst, *, src_dir_fd=None, dst_dir_fd=None, follow_symlinks=True)¶

Question 7

Which strings does the Regular Expression `'R[oau]\w+e'` match? *(8 points)*

Rome	rose	Rue	Dome
Rhizome	Rhizome	Ru\w+e	Raave

Rome,Raave

Question 8

Write the Docker one-liners to do the following *(10 points)*

Run and start a standard python container with the name `my_python`	docker run -it — name my_python python
Interact with `my_python`	docker run -it my _python
Calculate 4+4 in `my_python`	4+4
Stop `my_python`	docker stop my_phyton
Delete `my_python`	

Question 9

Match pairs. *(7 points)*

	postgreSQL		MongoDB
1	`Table`	1	`use sales`
2	`Row`	2	`show collections`
3	`\l`	3	`Document`
4	`\dt`	4	`db.sales.find()`
5	`\c sales`	5	`Collection`
6	`SELECT * FROM sales;`	6	`db.sales.distinct('client')`
7	`SELECT DISTINCT client FROM sales;`	7	`show dbs`