***S01 - Basic Pillars of ML***

1. You need to create a logistic regression model on house prices, and you want to impress your boss. What do you do?
2. Recode LR from scratch in Numpy
3. **Use Scikit for LR implementation, and work on feature engineering instead**
4. Which function is better written for reusability?

stopchars = [a, b, c, d]

def normalize\_word(word):

word = word.strip().lower()

word = “”.join([char for char in word if char not in stopchars])

return word

**stopchars = [a, b, c, d]**

**def normalize\_word(word, stops=stopchars):**

**word = word.strip().lower()**

**word = “”.join([char for char in word if char not in stopchars])**

**return word**

3. What’s a better function name for a function that normalizes a word token?

1. **preprocess\_word**
2. clean\_word
3. **process\_token**
4. **process\_string**
5. **normalize\_word**

4. Which function is better written?

def normalize\_word(word):

return word.strip().lower()

**def normalize\_word(word):**

**“””Processes and returns a word, stripping whitespaces and lowercases it”””**

**return word.strip().lower()**

**S02 - *Writing production grade code***

***S03 - Ways to deploy ML models***

***S04 - Docker***

1. What is the notation that a Dockerfile usually starts?
2. **FROM**
3. USER
4. LABEL
5. CMD

2. Which of the following commands is executed during runtime?

1. WORKDIR
2. RUN
3. **CMD**
4. FROM

3. Which of the commands is executed during build time (Choose 3)?

1. **RUN**
2. **WORKDIR**
3. CMD
4. **LABEL**

4**.** VMs can be easily manipulated to be lightweight and deployable

1. True
2. **False**

5**.** What is Docker Hub?

A. **Repository of docker images.**

B. Forum for docker enthusiasts

C. Issues platform to resolve Docker issues

D. Mailing list for Docker users

6. How do you list all the running containers on your local machine ?

1. **docker ps -a**
2. docker ls
3. docker ps
4. docker images

7**.** How do you stop a running docker container?

1. docker rmi <ImageID>
2. **docker stop <containerID>**
3. docker remove <containerID>
4. docker stop <imageID

8. Docker allows you to mount a volume from local folder

1. **True**
2. False

9. Which command in a Docker file specifies the default command for the container?

1. **ENTRYPOINT**
2. CMD
3. RUN
4. ENV

10. You want to build an image atop the latest & stable Ubuntu flavor. What should be the starting line of your Dockerfile? Assume latest flavour is 16.04.

1. FROM ubuntu:latest
2. **FROM ubuntu:16.04**

***S05 - AWS***

1. What’s the AWS service you would use to store your ML models and code?
2. EC2
3. S3 - IA
4. **S3 - Standard**
5. ECS

2. What’s the AWS service you would use to store your legacy ML models?

1. S3 - Standard
2. **S3 - IA**
3. S3 - Glacier
4. EC2

3. You are building an ML API to be exposed to your customers. Which services you may use to ensure scalability?

1. SageMaker, EC2, API Gateway
2. EC2, API Gateway
3. S3, ECR, EC2
4. **ECS, ECR, API Gateway**

4**.** You want a batch job to be executed on customer data every midnight, which service would you use?

1. **Batch**
2. EMR
3. EC2
4. ECS

5**.** Amazon Glacier is designed for: (Choose 2 answers)

A. active database storage.

B. **infrequently accessed data.**

C. **data archives.**

D. frequently accessed data.

E. cached session data.

6. Which one of the AWS services would you use to lower your EC2 bill?

1. **Spot instances**
2. Reserved instances
3. On-Demand Instances
4. Batch

7**.** Your ML API hosted on a EC2 instance not accessible to your customers or doesn’t respond to large volume requests. What do you do?

1. Horizontally scale the volume
2. **Deploy the API on ECS with Auto Scaling**
3. Add more instances behind a load balancer
4. Throttle the requests per customer

8. S3 can use used as a database backend.

1. True
2. **False**

9. AWS allows login into EC2 through (Choose 2)

1. **SSH with Keypairs**
2. UserID/Password
3. GUI
4. **RDP**

10. Which AWS service allows you to deploy Docker at scale?

1. ECR
2. EC2
3. **ECS**
4. Sagemaker