HANDS-ON TUTORIAL 1-2

Summary:
The tutorial will test the candidate's understanding of PEP8 and PEP257, and help understand what goes into creating a codebase worth its weight in gold. A good code needs to clean, readable, modular, well tested and most importantly the hallmark of a great data scientist.

The tutorials will ask the candidate to do the following;

A. Review the code provided by the instructor, and understand its utility
B. Understand the overall weaknesses of the codebase
C. Make a list of shortcomings w.r.t PEP8/PEP257. You may use tools to create such a list
D. Improve the code's standards by plugging these shortfalls
E. Write a list of test cases to improve the coverage for code

After the tutorial, the candidate should become well versed with what goes into creating quality code. He/She should also be now more confident about using tools to analyze code quality.

Session Name:
Writing production grade code

Session Details:
S02, Day 1

HANDS-ON TUTORIAL 3

Summary:
The tutorial build upon the candidate's grasp of Docker. The candidate will have to call upon all the understanding gathered from the instructor's session, and work upon creating a Docker environment for machine learning.

The tutorial will ask the candidate to do the following;

A. Write a Dockerfile that installs PyTorch , Keras and TensorFlow, using a base image of Ubuntu 14.04
B. Copy files from local that contain a sample code to print Keras code version
C. Build the Docker image
D. Mount and map a local folder to a running Docker container
E. Use nano to modify a file to reflect locally
F. Stop the Docker container

The candidate will be able to grasp the pitfalls of creating a Dockerfile, and how to avoid them. It should also allow them plan & create Dockerfiles for their own projects in the future.

Session Name:
Docker

Session Details:
S01, Day 2

HANDS-ON TUTORIAL 4-6

Summary:
The tutorial will showcase the AWS platform to AWS. The candidate will learn to work his way around cloud computing resources, and understand the basic workflow that is involved while setting up an ML project.

The tutorial will ask the candidate to do the following;

A. Launching an EC2 instance on AWS
B. SSH into and and install packages on the server
C. Securing the server through security groups
D. Install Docker on EC2
E. Download data from S3
F. Upload data to S3
G. Securing objects on S3
H. Create an docker image on EC2
I. Push the docker image to ECR
J. Pull an image from ECR, update and re push the image

The candidate will be able to setup a cloud computing environment for machine learning. This will come in handy for Day 3, when you create APIs for ML predictions.

Session Name:
Introduction to Cloud Computing

Session Details:
S02, Day 2