



Data Science CI

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A community of
data scientists
solving Africa's
toughest
challenges



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DAYS OF MACHINE LEARNING CHALLENGE

by



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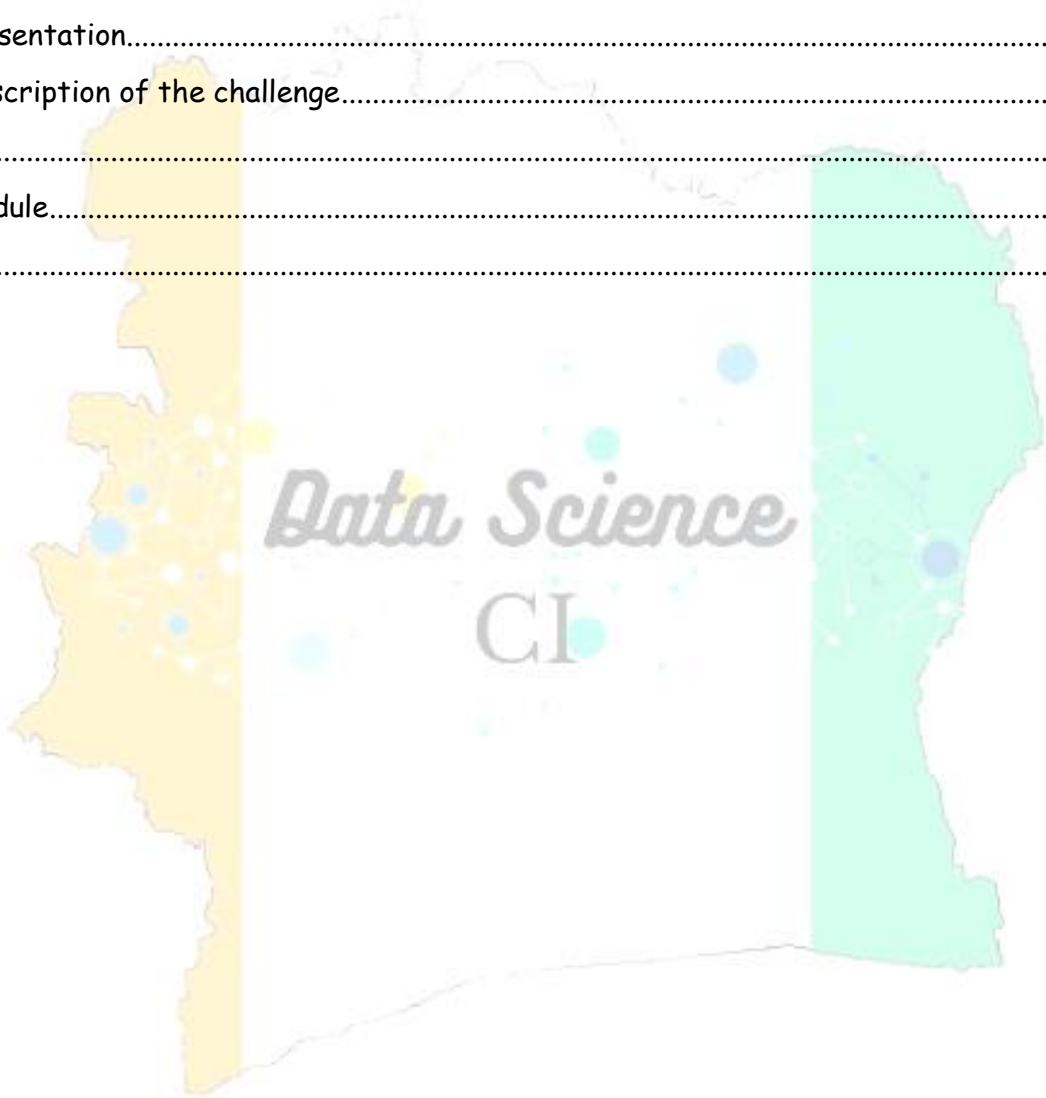
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I. Presentation & description

1. Presentation

Data Science Côte d'Ivoire (DSCI) is a small community of ivorian people loving the domain of **Data Science** (DS). Since we have diverse fields of studies, we are trying to give to all the members a basic understanding of the DS ecosystem in order to have them practicing and building the future of Africa by developing data driven projects in Côte d'Ivoire (CI).

2. Description of the challenge

« **DaysOfMLChallenge** » is a simple day-by-day based challenge that will be run on **Python**, **Machine Learning** (ML) and **Deep Learning** (DL) technologies **from the 2nd July to the 22nd July 2020**.

The main purpose of this challenge is to initiate Ivorians students/developers/learners to some of the tools (languages & packages) of DS.

We know it will be hard for many people since they do not all have already written python code or AI-based code, but we just want them to learn from each other and after this introduction challenge we will have weekly or monthly webinars to discuss on a particular topic at each moment.

II. Rules

The rules are just some little things to structure the challenge. They do not have any evil objectives so it would be very interesting if every challenger tries to follow them.





1. Follow our community on every social network that you have in the LINKS/GROUPS/PAGES part.
2. A topic with resources will be shared every two (2) days on the telegram channel and the whatsapp group, you'd be expected to learn them.
3. You have to report your learning at the end of the day in the form of :
 - a tweet on twitter.com. (Make sure you add @ci_data and #DaysOfMLChallenge #DataScienceCI in your tweet)
 - or a post on facebook.com (Make sure you add @DataScienceCI and #DaysOfMLChallenge #DataScienceCI in your post).
4. You will have to continue learning after every task and summarize it on the same thread of Twitter/Facebook Where you published the first tweet/post.
Example here:
https://twitter.com/jethwa_smit/status/1234128845218861061
5. You can discuss your doubts in the different groups (whatsapp or telegram) but we strongly recommend telegram so that new people will have the trace of previous discussions without having to resend things.
6. On Final Day we will select the eligible students/developers/learners.
7. Who falls in the Eligible List? The Person who has summarized his learning via tweet or Facebook post for all the days.



8. What happens if I join late?

You can join till 16th July after that, you won't be eligible.

Also you need to make sure you complete the previous contents and tweet/post your summary.

9. How we will check if the user tweets all the tasks in a single day?

Twitter/Facebook Records the time & date of tweet/post.

10. The time required per task?

It totally depends on individuals, on an average 1 to 3 hours.

III. Schedule

Tasks and resources will be given every two (2) days during a facebook live and like following:

Day 1-2: Python (intro, variables, loops, functions, classes, object, etc...)

This task will be an introduction to the **python programming language** which is recommended but not an obligation if you are already at ease with other languages like **R** and so on.

Day 3-4: Numpy/pandas/visualization

The second task will be related to the library cited before. It will help learners to work with different data files/types and turn them in a suitable format for the rest of the task.



Day 5-6: Visualization skills

Here we are going to present some important visualization charts that can help to understand basically the dataset.

Day 7-8: Brief ML introduction

At this time, we will introduce very shortly the ML process and work on a simple regression project.

Day 9-10: ML vs DL

This task will be the opportunity to introduce DL and show some differences between ML and DL approaches. Then we will try to solve the previous regression problem with a simple DL implementation.

Day 11-12: Deep learning on MNIST (neuron, MLP, ANN)

Let's build an Artificial Neural Network!

Day 13-20: Zindi presentation and last task ("Spot the mask challenge")

At this stage, we are going to get our hands into **Zindi platform** and enter the competition that will be the end of our journey.

Here are the steps we are going to work on:

- Image loading and processing/ visualization
- Model selection (from scratch/ pretrained)
- Model training and submissions





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IV. LINKS/GROUPS/PAGES



Telegram group



WhatsApp group



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@ci_data



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A special thanks to TensorFlow Users Group Mumbai