


HAMOYE DATA SCIENCE INTERSHIP

 <https://hamoye.io>

A 6-month remote internship program.
Open to everyone
(professionals and students in higher
institutions across Africa).



**DATA
ENGINEERING/MLOPS**



**DATA
SCIENCE**



**DATA
STORYTELLING**

July 2020

This workbook serves as a vade mecum for Data Science internship. Learners are required to go through this workbook so as to stay in tune with the internship objectives throughout its lifecycle.

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1.0 ABOUT HAMOYE

Hamoye is an edtech and talent development company with operations in the US, Bermuda and Nigeria. Hamoye's primary mission is to transform learning and talent development across Africa. Our business model is based on training, talent discovery and talent placement. Our social Learning Management Platform is designed to facilitate both virtual and blended learning. Our talent discovery programs applies a carefully designed multi-stage, competitive internship/training process to provide large scale learning opportunities and discover highly talented individuals. Ultimately, we seek to connect highly talented individuals with rewarding career opportunities.

Our Data Science internship program is designed to help recruit for our AI Labs (Hamoye AI Labs) while training talented Data Scientists, MLOps Engineers, and Data Visualization Storytellers in the process. Whether you make it to the end or not, you have a unique opportunity to acquire marketable skills, create new connections and challenge yourself to be better.

2.0 THE INTERNSHIP

Hamoye AI Labs (a division of Hamoye Technologies, a Delaware corporation) is seeking to recruit up to 10 Data Scientists, from entry-level to senior scientists/engineers/developers. Selection will be made through an open and remote internship program. Finalists will be invited to join Hamoye AI Labs. The internship program is designed as a competitive multi-stage process and will run in collaboration with MavenCode (<https://www.mavencode.com/>). All participants will have opportunities to earn various certificates in data science specializations and win monetary awards to help support mobile data expenses during the program. All participants will also have the opportunity to contribute to a unique open-source AI project.

- Data Science: An inter-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from many structured and unstructured data. Data science is related to data mining, deep learning and big data.
- Data Engineering/MLOps: A part of data science that focuses on practical applications of data collection and analysis. ML Operations (MLOps) relates to managing production ML lifecycle.
- Data Storytelling: The process of translating data analysis into layman's terms in order to influence a business decision or action.

2.1 How it Works

- A 6-month remote internship program. You will learn, connect, collaborate, and build.
- Open to everyone, no entrance exam required - professionals and students in higher institutions who are ready to commit the time and effort to scale through the rigorous program
- The program is divided into three tracks: Data Science, MLOps/Data Engineering and Data Storytelling
- Participants will be required to progress through an 8-sprint competition, each lasting 2 to 3 weeks.
- Each sprint has a pre-set training curriculum and a real-world use case challenge.
- Every participant who successfully completes a sprint and the associated challenge will earn a certificate from Hamoye for each sprint completed.
- Only 40% of participants are expected to progress from one sprint to the next.
- The top participants from each sprint are declared sprint winners. Sprint winners across all 8 sprints will share a total of NGN 1 million/88,000 ETB awards to help defray costs of mobile data.
- Participants will have an opportunity to work on a unique AI open-source project.
- Finalists will be invited to join Hamoye AI Labs.
- Hamoye will help recommend other highly placed candidates to other firms.

For questions and answers about the internship, take a look here:

<https://bit.ly/2BNN5On>

2.2 What to expect

As a data science intern, you are expected to:

- a. Study and pass all assigned courses
- b. Contribute to and work on the assigned open source project
- c. Interact and exchange ideas with other interns
- d. Participate in any assigned team projects.

3.0 PROGRAM CALENDAR

Below is a detailed programme calendar

3.1 Outline

The program is divided into eight different stages (A, B, ... H).

Table 1: Program Outline.

Stages	Certificate/ Data Scientist	Certificate/ Data Engineer	Certificate/ Data Storytelling	Timeline
Orientation / Onboarding call				1 week
A	Intro to Python for ML	Intro to Python for ML	Intro to Python for ML	2 weeks
B	Regression in ML	Regression in ML	Regression in ML	2 weeks
C	Classification in ML	Setting up Kubernetes, Setting up Minikubes	Computational Thinking & Data Visualization	3 weeks
D	Neural Nets, Image Recognition & Object Detection	Getting Started with Kubeflows	Python Libraries for story telling	3 weeks
A WEEK BREAK				
E	Practical Time Series	Setting up Microk8 for ML	Data Curation	3 weeks
F	Data Science Practitioner 1	Setting up Model Training Pipelines	Data Storyteller Program 1	3 weeks
G	Data Science Practitioner 2	Model Serving Pipelines	Data Storyteller Program 2	3 weeks
H	Data Science Practitioner 3	End to End Integration	Data Storyteller Program 3	3 weeks

3.2 Calendar

The timetable provided in Table 1 has been put together to foster community interaction between all students enrolled in this cohort.

Stage	Date
Orientation / Onboarding call	1st July - 7th July
A	8th July - 21st July
B	22nd July - 4th August
C	5th August- 25th August
D	26th August - 15th September
Stage break (September 16 - September 22)	
E	23th September - 13th October
F	14th October - 3th November
G	4th November - 24th November
H	25th November - 15th December

Table 2: Learning Calendar

- Webinars: (closed) 1 hour 30 minutes interaction with industry experts.

3.3. Stages in Data Science internship

The Data Science internship is divided into four phases

- **Application Phase:** There are no stringent registration rules during this phase. At this stage, the learners are required to register on the platform and sign up for the program. Since the internship is open, all applicants who have successfully completed the registration process have been accepted to participate.

- **Onboarding Phase:**

This is the orientation phase. The following activities will take place during this phase:

- Go through the program's handbook to ensure you fully understand what to expect during the program.
- Work with Hamoye team members to ensure you can navigate the Hamoye platform (a social Learning Management Platform)
 - Complete all small tasks assigned. i.e creating tickets, updating profile pictures, joining study groups and interaction amongst themselves.
- Join the program's slack channel and ensure you know how slack works
- Go through prerequisite study materials on Github and Google Colab.
- Participate in the program virtual party
- **Learning Phase:** Learners will take some courses based on their track of interest - bearing in mind that the training method differs per stage. Course engagement will follow four methods. These include
 - **Self-guided learning:** Learners absorb the content by themselves. Learners can seek support from their peers on slack and on Hamoye.
 - **Webinars:** Webinars will be delivered periodically by industry experts from companies such as Amazon, Mavencode, Netflix etc.
 - **Platform support:** Learners have the advantage of reaching out to Hamoye support if there are account related issues.
 - **Office hours:** instructors will maintain office hours during the later stages of the program to answer questions and provide guidance.

- **Project Phase:** Every course will end with a real life use case project. Learners are expected to complete the use case projects and take project-specific graded exams. During the later stages, participants' successful commits to the open source project will contribute to overall assessment.

4.0 COMMUNICATIONS CHANNELS

For the purpose of communication during the program, the following channels will be used: discussions on Hamoye, email, zoom and slack.

- **Zoom/Youtube stream** will be the official channel for webinars and all audio and video calls.
 - **Slack:** This is going to be the interactive space for the course. We understand the importance of interaction and this space was curated with that in mind. Students are encouraged to interact with each other and also interact with the Hamoye team regarding any questions they might have. Different channels have been created to serve several purposes and more can still be created as the need arises.
 - **Hamoye.com:** For each of the courses, there is a discuss button that allows you, as well as other learners, to share ideas around learnt concepts, ask questions from your peers and provide answers to questions.
-

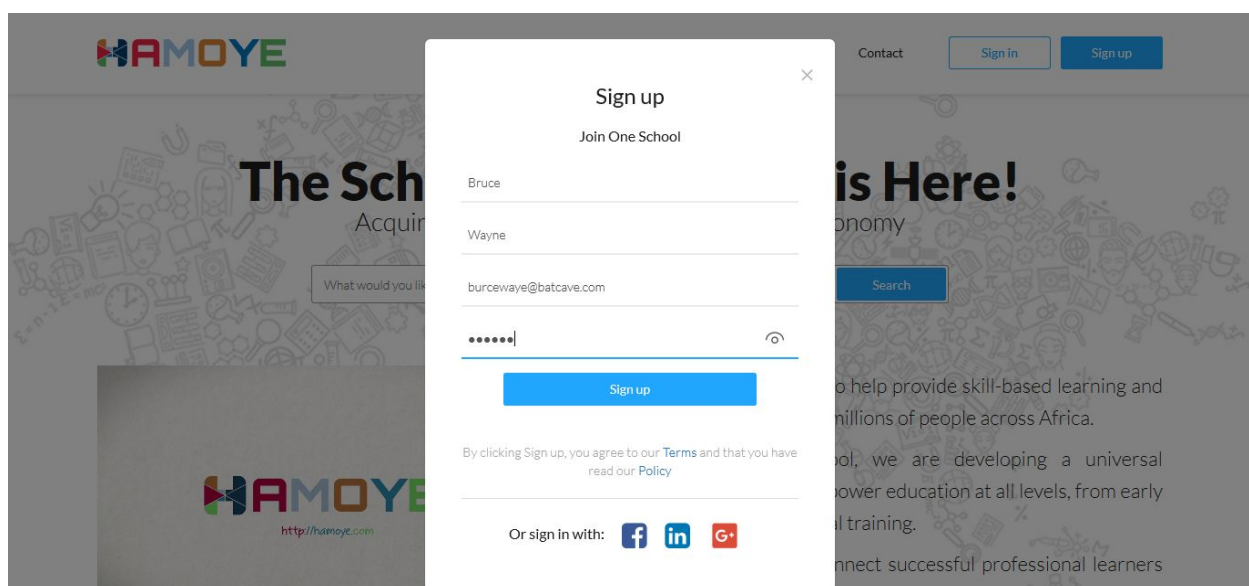
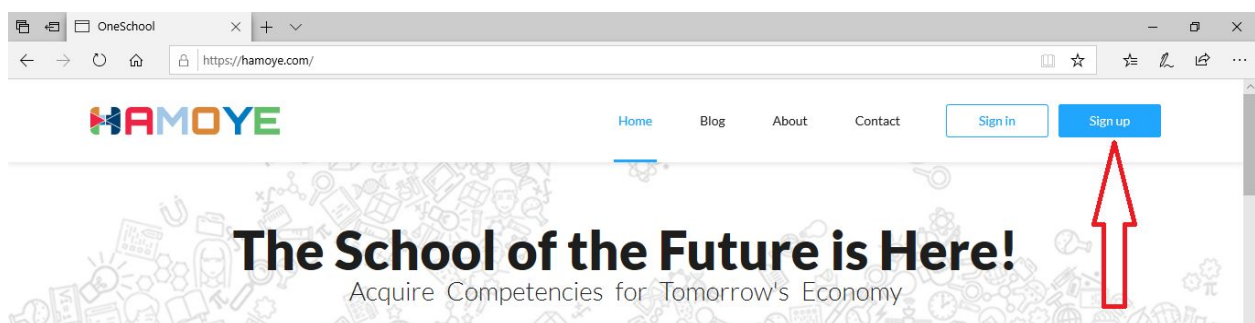
5.0 NAVIGATING THE HAMOYE WEB APP

Whether you are seeking to learn or looking forward to sharing knowledge, the Hamoye web app is specially tailored to cater to every knowledge enthusiast.

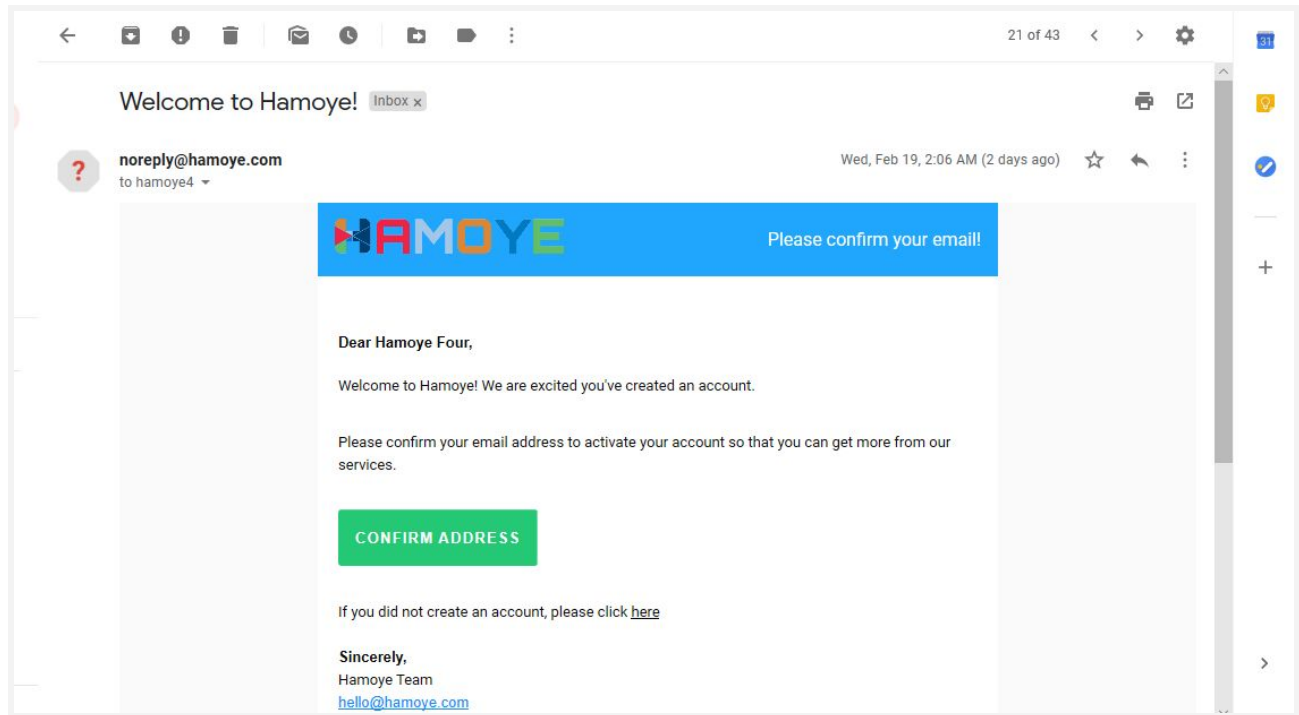
Students on Hamoye have a broad range of intellectually rewarding courses to select from. But first, let's teach you how to sign up and navigate the app.

5.1 How to sign up

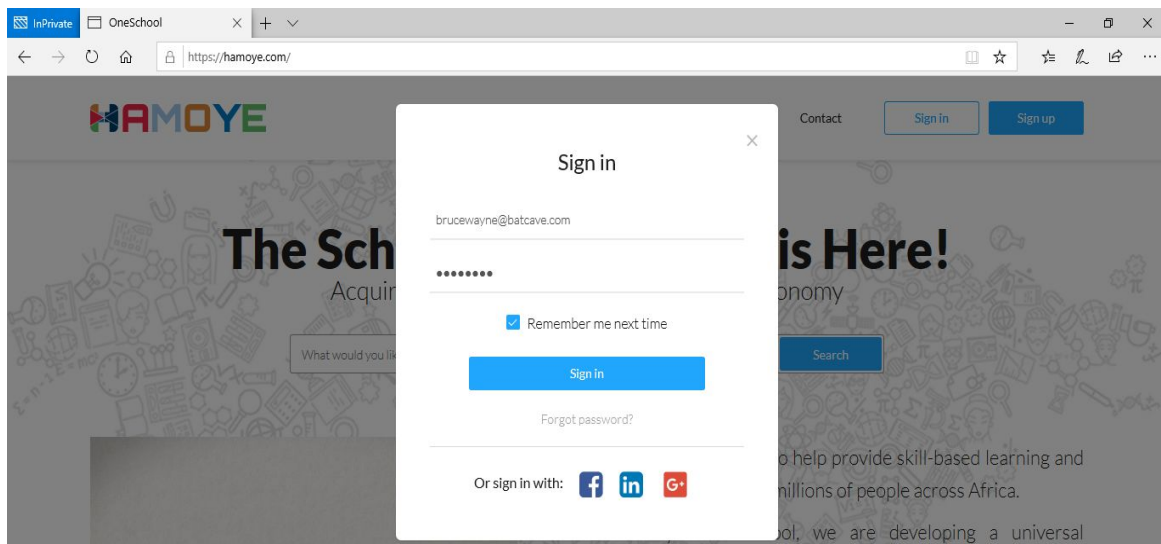
1. Visit <https://hamoye.com>
2. Click the sign-up button and fill the form on the dial log box that pops up. After that click the sign-up button below.



3. Be certain to input a functional email (that you have access to) as you will be asked to confirm it.



4. Confirm your email address, log-in to your new account, and begin to explore!



5.2 Selecting your account type

1. After confirming your email address, you will be asked how you intend to use Hamoye:

How do you intend to use Hamoye?

As a Student	As a Teacher
As a School Administrator	As a Hamoye Administrator

[Cancel](#) [Confirm](#)

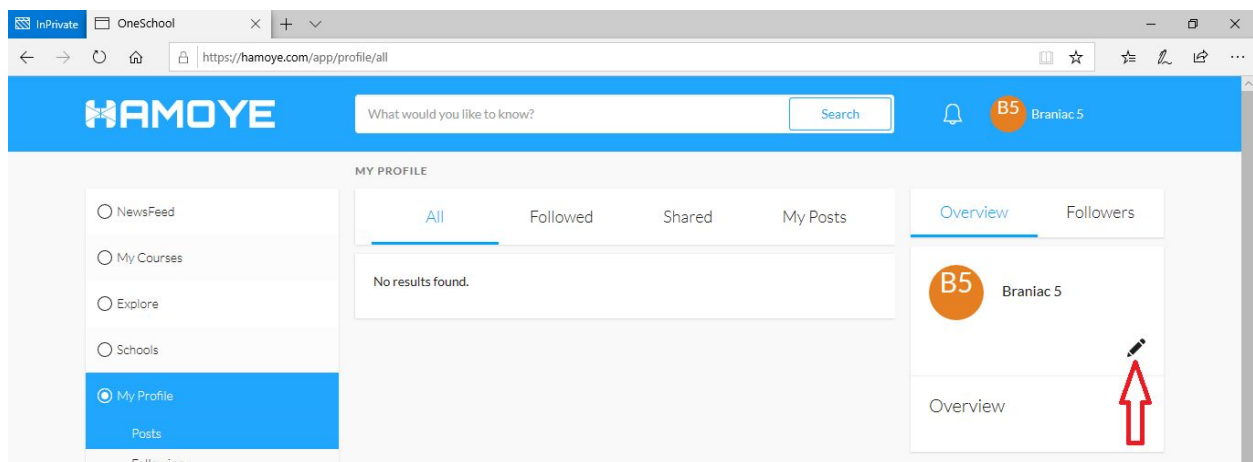
2. Select the appropriate option as it applies to you and confirm. For Data Science - Click "As a Student"

5.3 Editing your profile

1. After logging in to your account, you can access your profile by clicking the 'My Profile' tab on your left-hand side of the screen.

The options in the dropdown menu allow you to manage your posts, connections (followership) and also view your certificates (after you complete the Data Science Internship).

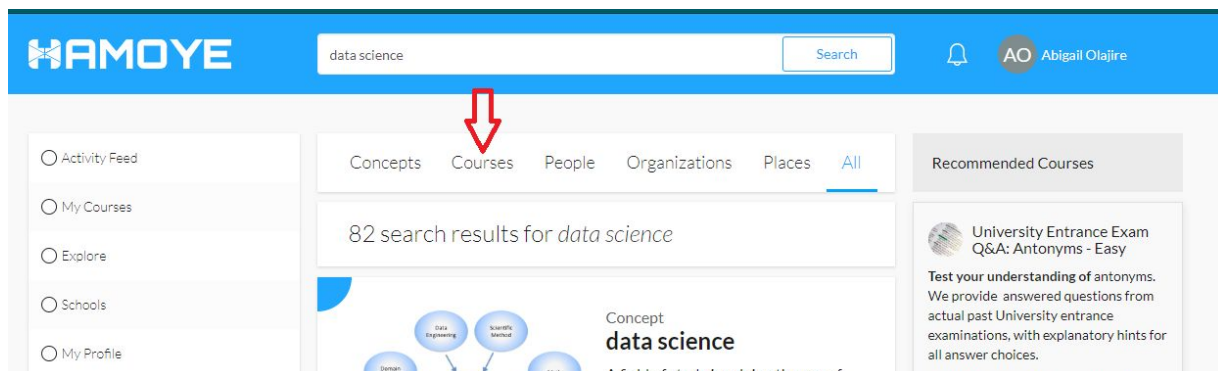
2. Use the pencil icon (indicated by the red arrow) to edit your name.



Under the 'My Profile' tab, there is a dropdown menu with various options where you can view your posts, followership, certificates received, competencies acquired, roles, and guardian requests (for users below the age of 13).

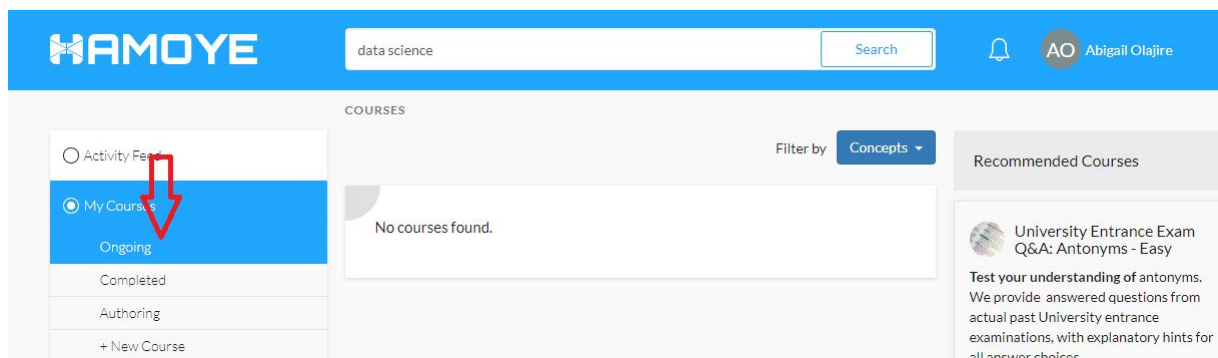
5.4 How to find Data Science internship course

To find a course on the Hamoye platform, type a keyword relating to the course you are interested in the search column at the top center of the page. In this case, **Data Science** is sufficient. Click on “Course” and scroll down to - Data Science Internship Cohort20-01.



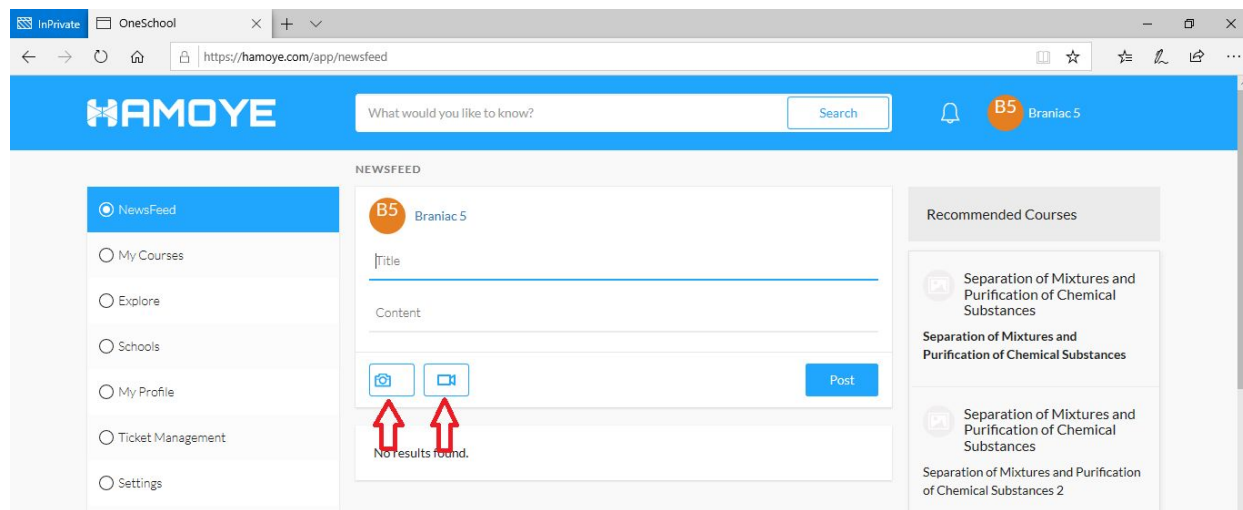
5.5 How to check your ongoing course

To check your ongoing courses, click ‘My Courses’ and click the ‘Ongoing’ tab.



5.6 The news tab feed

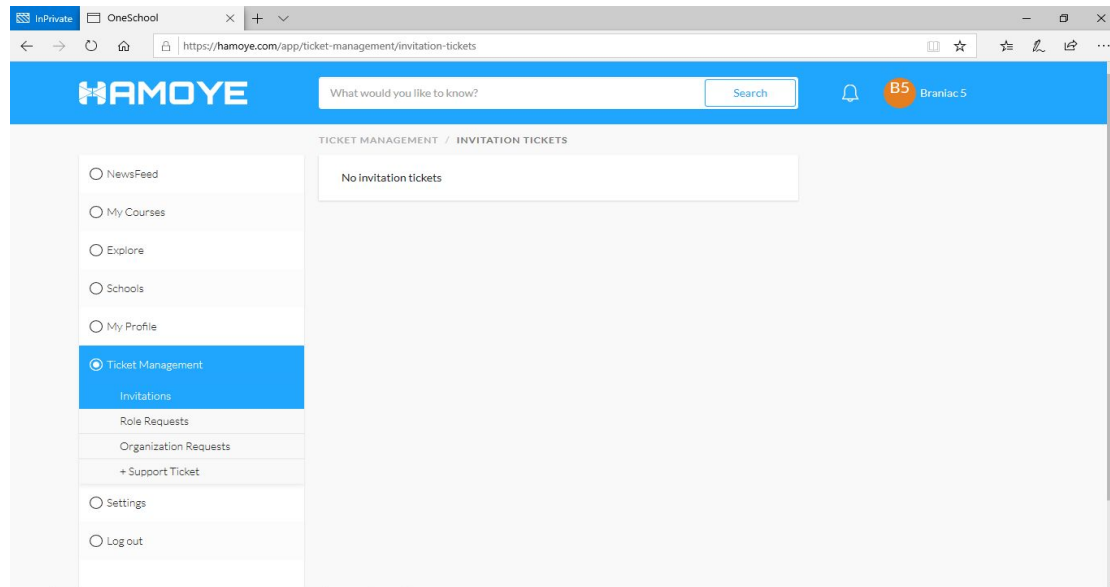
1. The news feed is where recent activities taking place on the platform are displayed. You can also post comments and share media using the camera or video icon button as seen in the screenshot below:



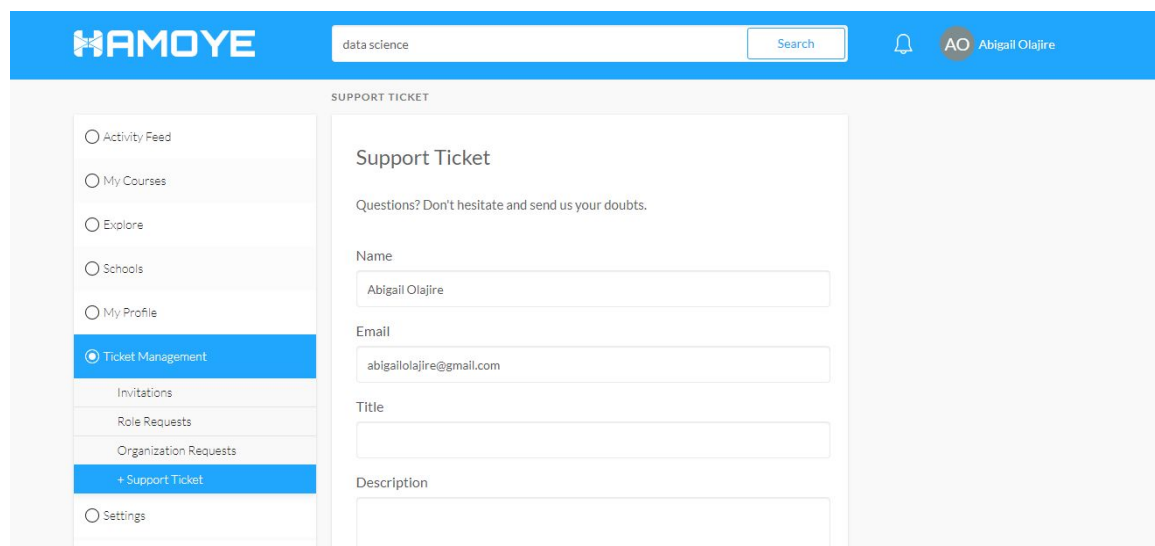
2. Fill in the Title and Content of your post/comment and after adding a media or not (as you please), click on the 'Post' tab highlighted blue.

5.7 Ticket management

1. This tab allows you to manage invitations to join study groups, review, and accept a teaching role if you are considered by an organization.

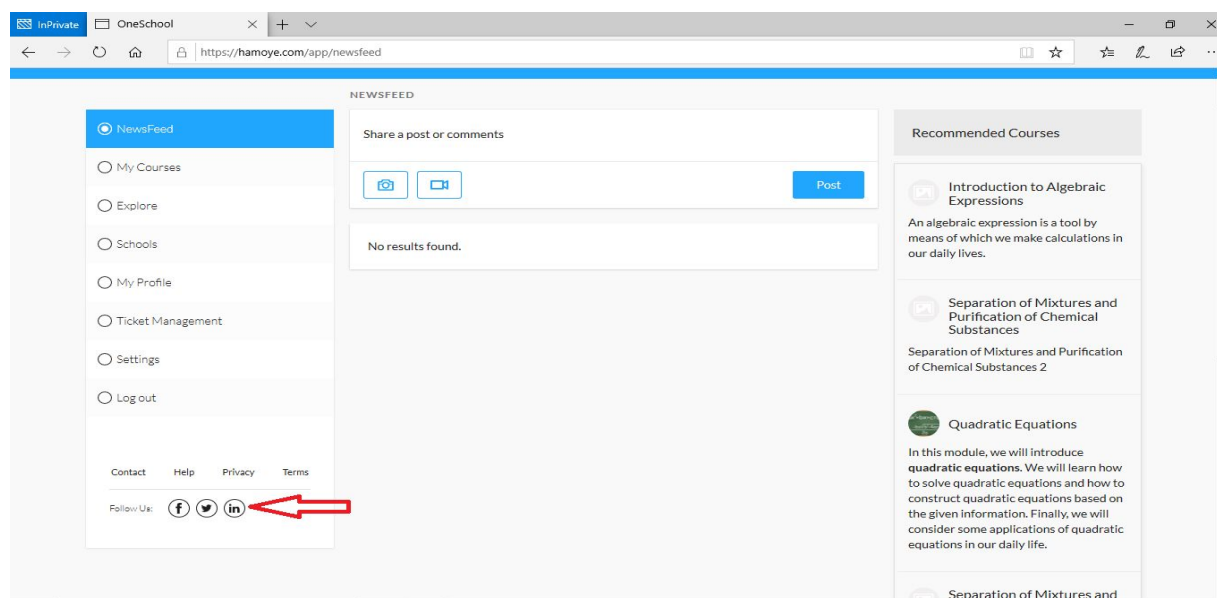


2. We love to hear from you and that is why the '**Support Ticket**' tab enables you to give us feedback and register any doubt you may have so that we can respond accordingly.

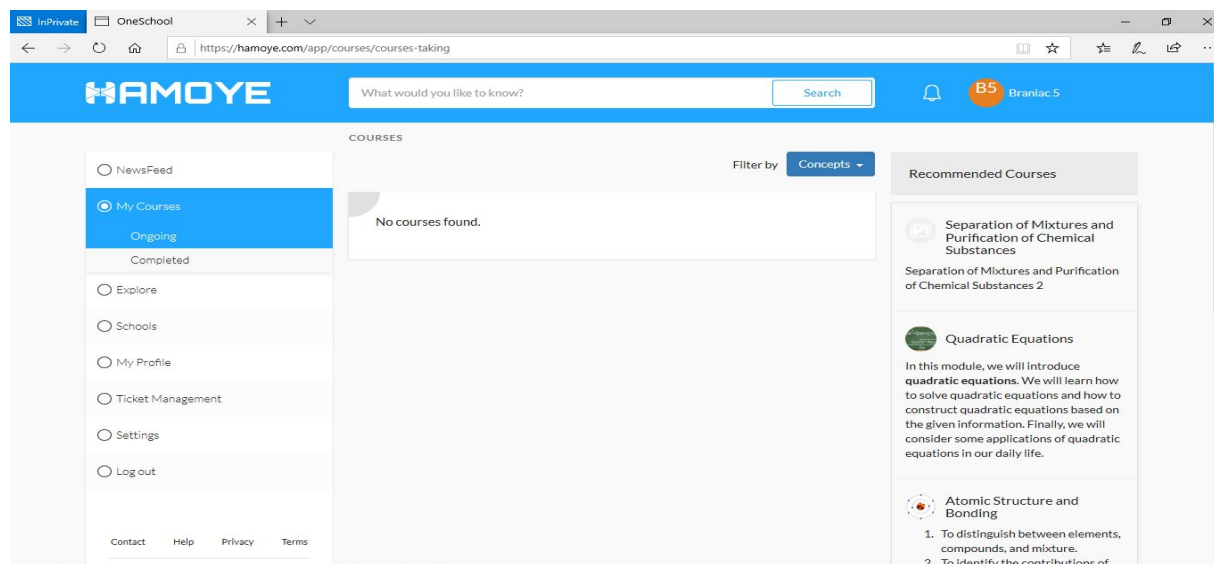


5.8 Using social media widgets

1. To access our social media platforms through the web app, simply click on either of the widgets that have the symbol of the preferred social media you wish to visit.

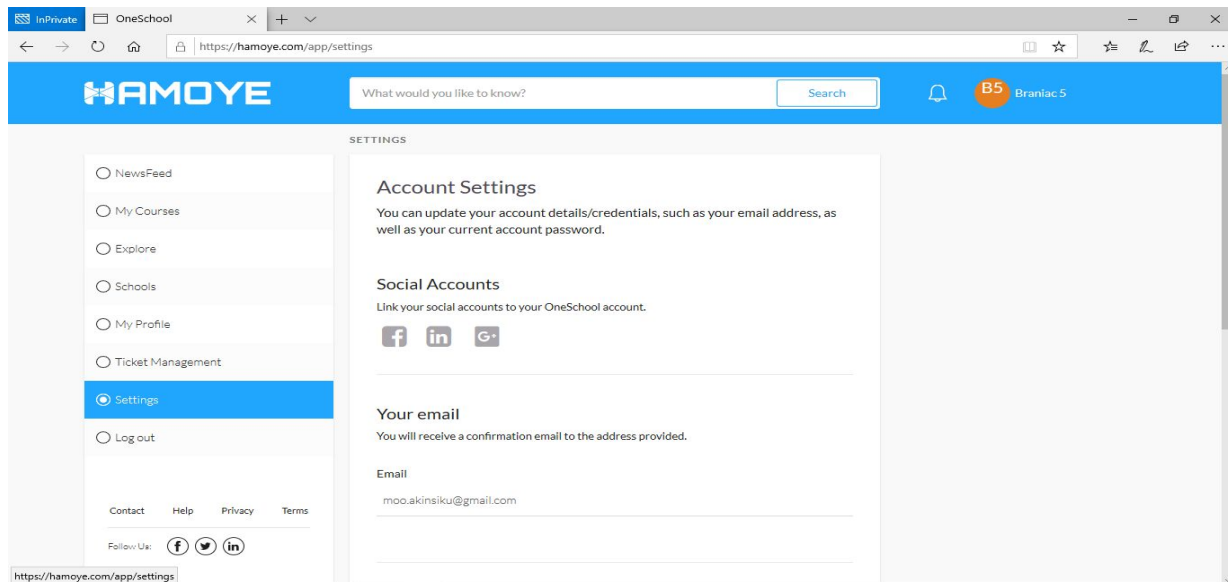


2. To view your completed courses, click the 'Completed' tab which is directly below the 'Ongoing' tab.

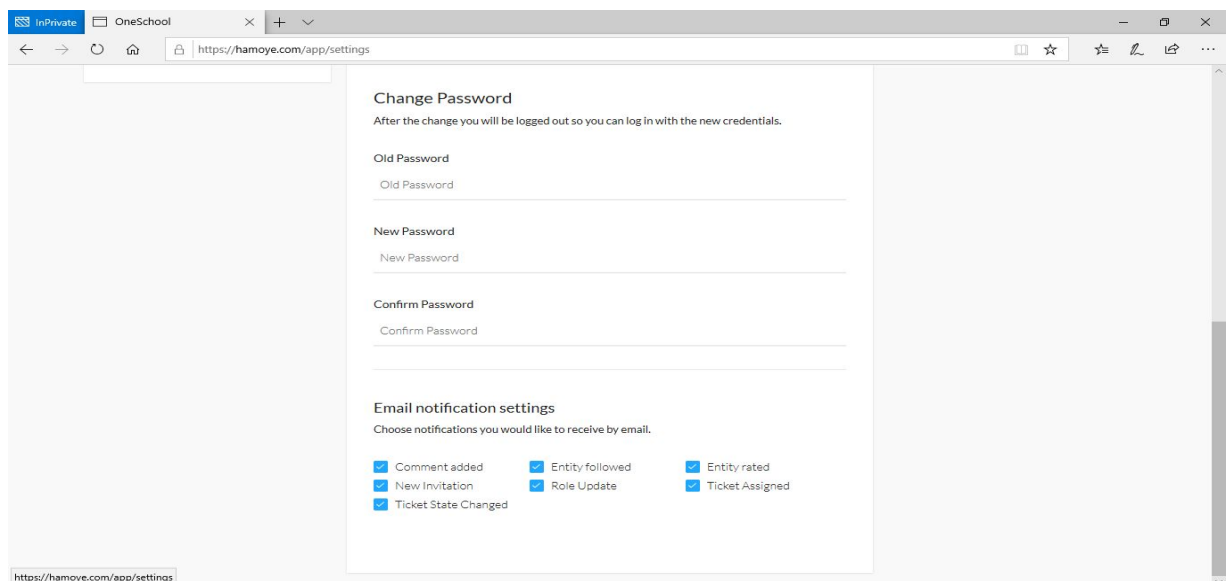


5.9 Account settings

1. The 'Account Settings' tab allows you to change your password and email account. You can also link your social media accounts to the Hamoye web app so that whenever you post on Hamoye, it reflects on your social media page(s).

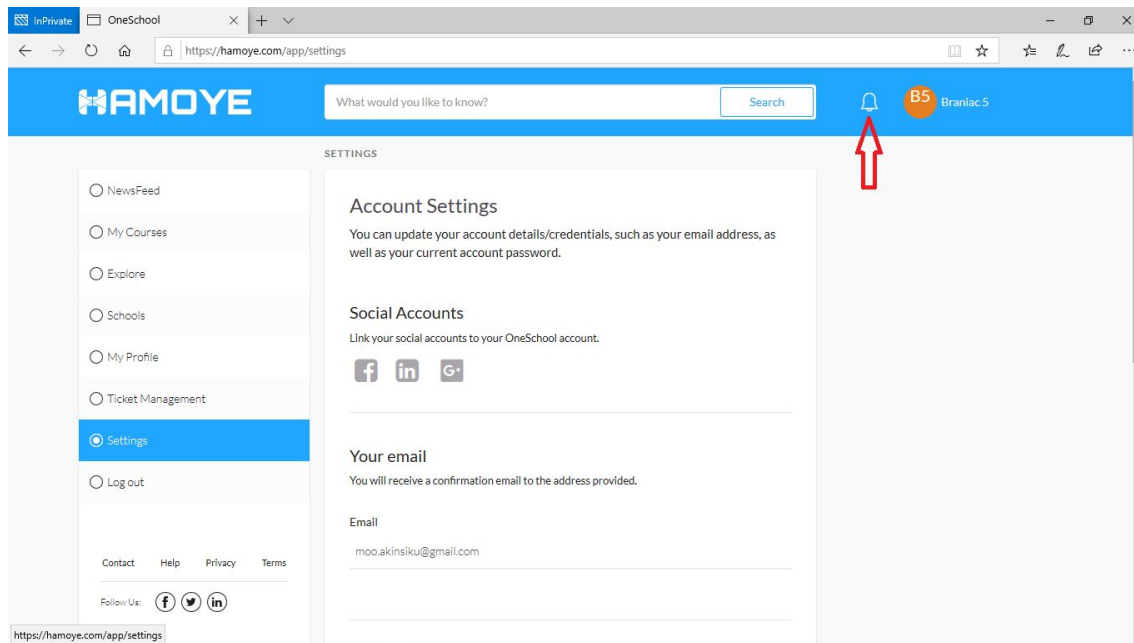


2. In the last section of the settings page, you can also define what notifications you want to get in your email inbox by checking and unchecking the boxes.



5.10 Checking notifications

You can view notifications on activities that have been going around your account by clicking on the bell icon beside the search bar



5.11 OneSchool

Apart from the Data Science course, Hamoye's OneSchool has a plethora of other courses you might be interested in. Click on the "Schools Tab," scroll down and click "OneSchool." You can also just search.

The screenshot displays the Hamoye website interface. At the top, there is a blue header with the Hamoye logo, a search bar with the placeholder text "What would you like to learn?", and a user profile for "Abigail Olajire". Below the header, the main content area is titled "SCHOOLS / ONESCHOOL". On the left, a sidebar menu lists various options: Activity Feed, My Courses, Explore, Schools (selected), OneSchool, + New Organization, My Profile, Ticket Management, Settings, and Log out. The main content area shows the "OneSchool" profile with tabs for About, Courses, Followers, and Members. The "About" tab is active, displaying the OneSchool logo, a "+ Follow" button, and an overview section. The overview text states: "At Hamoye, we are obsessed with a single vision: that *human capital represents an immense opportunity for Africa in the coming decades*. Our mission is to help realize this vision by training and developing an army of **problem solvers** across the continent." To the right of the profile, there are two recommended courses: "University Entrance Exam Q&A: Antonyms - Easy" and "University Entrance Exam Q&A: Parts of Speech".

6.0 HAMOYE COMMUNITY CODE OF CONDUCT

6.1 Ground Rules

We're all part of the same community, so be friendly, welcoming, and generally a nice person.

- Be someone that other people want to be around.
- Be respectful and constructive. Remember to be respectful and constructive with your communication to fellow members. Don't get into flame wars, make personal attacks, vent, or rant unconstructively. Everyone should take

responsibility for the community and take the initiative to diffuse tension and stop a negative thread as early as possible.

- Be collaborative. Work together! We can learn a lot from each other. Share knowledge, and help each other out.
- Participate. Join in on discussions, offer feedback, and help implement that feedback.
- Basic etiquette for online discussions. Don't send messages to a big list that only needs to go to one person. Keep off topic conversations to a minimum. Don't be spammy by advertising or promoting personal projects which are off topic.

6.2 Channels

There are a few channels already set up for you on slack. You may want to dive right in after learning a little about their uses. They are:

#general: This channel is for announcements by Hamoye Team administratives. Announcements are also made in this channel by Hamoye Team Administratives.

#ask-hamoye-team: Ask the Hamoye Team administrative questions.. All technical questions found here will be deleted. You can also reach out to the team at hello@hamoye.com

#Introductions: Introduce yourself to the rest of us, don't forget to tell us what you are here and what you do.

#virtual-party: This channel was created solely for Hamoye's virtual party. E-lunch is on us :)

#random: A place for non-work-related flimflam, faffing, hodge-podge or jibber-jabber you'd prefer to keep out of more focused work-related channels..

#stage-a-questions-and-answers: Ask technical questions related to course content and get help from teaching assistants and other learners

6.3 Unacceptable Behaviours

DO NOT

- Post the same message in 2 different channels. If you do, you will be asked to delete one or both messages will be deleted. Basically, **NO CROSS POSTING**.
- Although you can share a post from one channel to another, you can only do this ONCE, so as not to spam other channels.
- Impersonate another member; by using the same username or profile picture or one that is very similar or close to that of another member.
- Post sexually explicit content or otherwise content banned in your country
- Post tips on how to download, or links to downloading someone else's copyrighted content for free
- Post Personal Attacks. Personal attacks will not be tolerated
- No subtle put-downs or unfriendly language. Even if you don't intend it, this can have a negative impact on others.
- No harassment. This includes, but isn't limited to: bullying, intimidation, vulgar language, direct or indirect threats, sexually suggestive remarks, patterns of inappropriate social contact, and sustained disruptions of discussion.

if you feel there's something you do not like, kindly ask for the channel moderator and address it to them or you can send a mail to hello@hamoye.io

6.3 Joining Slack

1. Visit <http://bit.ly/hamoye-ds-internship-slack> to join the slack community
2. Next, you should confirm your email address



Next, confirm your email address

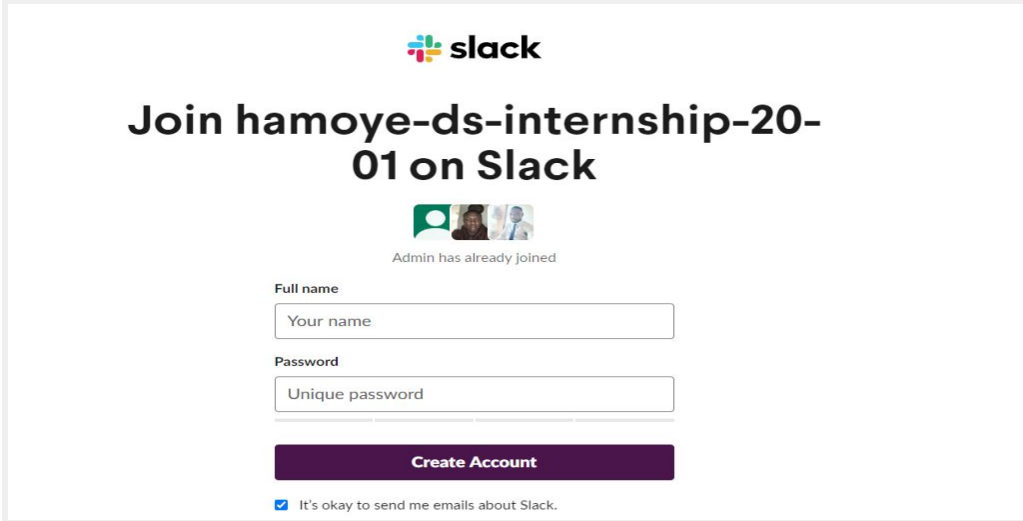
We've sent an email to eniolaplus08@gmail.com.
Click the button inside to confirm your address.



 [Open Gmail](#)

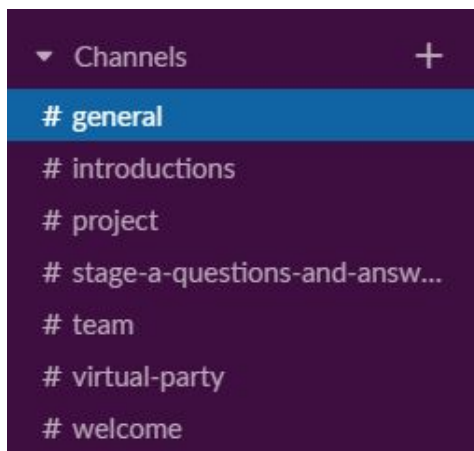
 [Open Outlook](#)

3. After confirming your account, you should fill in your credentials to create your account



The image shows a Slack sign-up page for a workspace named "hamoye-ds-internship-20-01". At the top, the Slack logo is displayed. Below it, the workspace name is prominently shown. A small profile picture of the workspace is also visible, with the text "Admin has already joined" underneath. The sign-up form includes two input fields: "Full name" with a placeholder "Your name" and "Password" with a placeholder "Unique password". Below these fields is a purple "Create Account" button. At the bottom, there is a checkbox labeled "It's okay to send me emails about Slack." which is currently checked.

4. Channels: You can send messages to these channels based on the [channel rules and regulations](#). Click the cross + to have access to all channels in the slack community



6.4 Update Profile

To update your profile from your PC, click on your name (or the drop down right beside it) on the left pane of the hamoye-ds-internship workspace. Select view profile and click on edit profile from by the right pane.

7.0 FREQUENTLY ASKED QUESTIONS

Let's take a look at some of the questions that have frequently popped up in our build up to this course.

1. Will Hamoye provide offline videos for the Data Science course?

In order to provide the best experience, minimal data consumption and ubiquitous access to our course content, the Data Science course, is presented in a text format categorized into various lessons aimed at ensuring users ability to track progress during the course.

2. Can I take my quiz using my mobile phone?

Absolutely! Hamoye web application allows you to take the course as well as quizzes on your mobile phone

3. Does Hamoye provide technical assistance to help interns during the course?

The course is self-guided. Participants absorb the content by themselves. Participants can seek support from their peers on slack and on Hamoye. Instructors will also maintain office hours during the later stages of the program to answer questions and provide guidance.

4. How will I be tested at the end of the course?

At the end of each stage, interns will be tested with a real life use case project. Participants are also expected to complete the use case projects and take project-specific graded exams. During the later stages, participants' successful commits to the open source project will contribute to overall assessment

5. Will admission letters be given for display on LinkedIn?

No, admission letters are not issued.

6. What are the requirements for a Data Science course?

Data Science is widely respected as a major skill for problem solving in the world. Hence, for one to enrol in the Hamoye course, it is required that one is willing to be a problem solver. Also, but not strictly, one should have basic knowledge of computer programming.

7. When does the internship commence?

The internship commences officially on July 1st, 2020

8. How long will the internship last?

The expected duration is 6 months (twenty-four weeks) for candidates who make it all the way to the end. Only 40% of participants will advance from one stage to the next.

9. What is the nature of the internship?

The internship is fully remote and as such all meetings and activities will take place virtually on Hamoye platform.

10. Do I need to pay to be a part of the internship program?

The internship program is free and no entrance exam is required. What is required is your time, effort and commitment in order to scale through the rigorous program.

11. How much will successful candidates earn after the internship?

Target remuneration for selected candidates after the program:

- Entry level: from NGN 150,000 per month or equivalent for your country
- Senior Scientists/Devs: NGN 250,000 to NGN 750,000 per month or equivalent for your country

12. How many tracks exist in the internship?

The internship is divided into three tracks:

- Data Science
- MLOps/Data Engineering
- Data Storytelling

13. Can I choose more than one track?

You are expected to select only one track.

14. How many stages are in the program?

Participants will be required to progress through an 8-sprint competition, each lasting 2 to 3 weeks.

15. Will I be paid monthly during the duration of the Internship?

Participants **will not** be paid monthly for the duration of the program. Although, the top participants from each sprint will be declared sprint winners. Sprint winners across all 8 sprints will share a total of NGN 1 million awards (or equivalent) to help defray costs of mobile data.

16. How many hours am I expected to devote for the internship?

The number of hours to be devoted for the internship is subjective and based on your current level of expertise. As a beginner, intermediate or expert, you may have to devote at least 35–40, 20-30, and 10-15 hours per week respectively due to the rigorous nature of the program.

17. What do I tend to benefit from the Data Science internship?

- Every participant has the opportunity to learn (**FOR FREE**) using a pre-set training curriculum, connect, collaborate and build a real-world use case.

- Every participant who successfully completes a sprint and the associated challenge will earn a certificate from Hamoye for each sprint completed.
- Participants will have an opportunity to work on a unique AI open-source project.
- The top participants from each sprint will be declared sprint winners and share a total of NGN 1 million awards to help defray costs of mobile data.
- Finalists will be invited to join Hamoye AI Labs.
- Target remuneration for selected candidates after the program
 - Entry level NGN 150,000 per month or equivalent in your currency
 - Senior Scientists/Devs: NGN 250,000 to NGN 750,000 per month or equivalent in your currency.