



## DEEP LEARNING COHORT 1.0

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### Capstone Project(Group Project)

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6th February, 2024

**Submission Date:** 2nd March, 2024

**Mentor:** Mustapha Abdullahi

**Lead Mentor (ArewaDS):** Dr Shamsuddeen Hassan Muhammad

**Contact Mentor:**

Telegram: ArewaDS Deep Learning

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Hello there! I hear you are a super hero within the Deep Learning (DL) world and you have mastered the fundamentals of DL. I will need your help with solving a classification task using pre-trained networks. Please, see details in §1

## 1 General Information

- 4 groups, each of 4-5 fellows<sup>1</sup>. See your groups §4
- Use any image dataset, preferable local nigerian (or African) data. You can find datasets in Kaggle Datasets, Zindi Africa, etc.
- Use at least two pre-trained models for solving your problems e.g. ResNet, AlexNet, etc. You can find pre-trained models in PyTorch Vision Models, Hugging Face Models
- Deploy one or any of the final trained models, on local or cloud. You can deploy using Gradio, Hugging Face, etc

Feel free to go beyond this specifications to do additional computer vision tasks, if you have enough time.

## 2 Deliverables

- Clean and modular **ML code on GitHub**. This can consist of notebooks, *.py* files, etc. Strongly recommended to add *README.md* file describing your work and how to run any part of your work. You can create a new GitHub repo for your group, adding group members to make changes.
- 2-page double column **research paper**. Showing training logs - WandB, tensorboard, etc. **Maximum of 2-pages** excluding references. Please, click **Similar Sample** and **Writing Templates** for Word or L<sup>A</sup>T<sub>E</sub>X. Feel free to organise your writing in your preferred way. Advisably, spend little time/writing on introduction, related works, etc. Focus more on writing what you have done and the results.
- 3-5 minutes **short video** outlining your work. This should briefly introduce your work and most important show a demo the deployed model. Feel free to follow any pattern for the video.

## 3 Support

If you have technical or non-technical issues. Kindly feel free to contact your colleagues and I anytime via Telegram or Email. Happy to help review or debug your code.

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<sup>1</sup>Working in groups can be very tricky. Please, try to collaborate as much as possible. The deadline is about one month. If you collaborate well, you will have advantage of 4 months and if not, this project will feel like you had only one week. Kindly contact me if you have any team issues.

## 4 Groupings

### Group 1

Abubakar Salisu Bashir  
Fatima Muhammad Adam  
Abdulrahman Yusuf  
Abdullahi Ahmad  
Saminu Muhammad Aliyu

### Group 2

Lukman Aliyu Jibril  
Bilqisu Ismail  
Mohammed Nasiru  
Umar Sani Muhammad

### Group 3

Aminu Hamza Nababa  
Bala Mairiga Abduljalil  
Alamin Musa Magaga  
Lurwanu Abdullahi  
Muhammad Ibrahim Isah

### Group 4

Faridah Yusuf  
Sani Aji  
Munzali Alhassan  
Musa Adamu

## 5 Submission

Please, submit using the Google Forms link [↗](#)here