**DSA AFRICA 2023 NATURAL LANGUAGE PROCESSING MODELS**

**ENVIRONMENTS**

You will require one of these environments to run the notebooks, please download and practice in advance.

1. Jupiter notebook - Jupyter Notebook is an open-source web-based interactive computing environment for creating, editing, and running code in various programming languages, including Python. You can install Jupyter Notebook using the following command in your terminal or command prompt: pip install Jupyter or use this link to download [Project Jupyter | Installing Jupyter](https://jupyter.org/install) the notebook.
2. GOOGLE COLAB – IT a cloud-based, free-to-use, interactive computing environment that provides a Jupyter Notebook-like interface for running Python code. To write and run python code on colab you need to open a google. To register for colab use this link [Welcome To Colaboratory - Colaboratory (google.com)](https://colab.research.google.com/)
3. KAGGLE notebook - Kaggle Notebooks is part of Kaggle, which is a popular online community and platform for data science and machine learning practitioners. Kaggle Notebooks provide a web-based environment for creating, running, and sharing code note. To register for colab [Kaggle: Your Home for Data Science](https://www.kaggle.com/) use this link.

**LIBRARIES**

1. Sacremoses library - is a Python library that provides a set of tokenization and normalization functions for text processing. It is a Python implementation of the Moses tokenizer, which is a widely used tokenizer for natural language processing (NLP) tasks. To install in *use !pip install -q sacremoses.*
2. Sacrebleu - SacreBLEU is a Python library that provides an implementation of the popular BLEU (Bilingual Evaluation Understudy) metric for evaluating the quality of machine-generated translations in natural language processing (NLP) tasks. To install in your local environment! pip install -q sacrebleu.
3. Transformers library - it is a popular open-source library for natural language processing (NLP) tasks. To install it *pip install transformers.*
4. Pytorch library - PyTorch Geometric is a library for deep learning on irregular input data such as graphs, point clouds, and manifolds. skorch. To install in your local environment, use *pip install torch torchvision torchaudio --index-url https://download.pytorch.org/whl/cu117*

**PC SPECIFICATION**

These are the recommended laptop specifications

1. Operating System: Windows, macOS, or Linux operating system.
2. Processor: A multi-core processor with at least 2 GHz clock speed or higher.
3. RAM: Minimum 4 GB of RAM or higher
4. Storage: At least 100 GB of free disk space for installing Python, Jupyter Notebook, and any additional libraries or dependencies.
5. Python: Python 3.x installed on your PC, along with the necessary libraries.
6. Web Browser: A modern web browser, such as Google Chrome, Mozilla Firefox, or Microsoft Edge, to access the Jupyter Notebook interface.