Project Participants:

1. RACHIDI Inass
2. MARONE Mamadou

Description of the Project: Our project aims to utilize large-scale media analysis techniques for the detection of brain tumors in X-ray images. We intend to employ machine learning (ML) and deep learning techniques to analyze the features extracted from the images and classify them into glioma - meningioma - no tumor and pituitary categories. The project involves preprocessing the X-ray images, extracting relevant features, and implementing classification algorithms to accurately identify the presence of tumors.

Datasets: We plan to use publicly available datasets containing X-ray images of brains. These datasets are obtained from Kaggle [1].

Expected Deliverables Every Week:

1. Week 1:
    - Data collection and preprocessing; explore available datasets and begin cleaning and formatting the data for analysis.
    - Feature extraction: implement methods to extract relevant features from the X-ray images.
2. Week 3:
    - Initial model development; start building baseline ML models for tumor detection using extracted features.
    - Model refinement: fine-tune models and explore deep learning techniques for improved performance.
    - Evaluation and validation: assess the accuracy and effectiveness of the developed models using validation datasets.
3. Week 4:
    - Documentation and report writing, compile project findings, methodologies, and results into a comprehensive report.
    - Final presentation: prepare and deliver a presentation summarizing the project outcomes, challenges faced, and future directions.

[1] Brain Tumor Image DataSet : Semantic Segmentation