Integrating and Deploying AI Solutions

Workshop 1: Pipeline design (Group)

Instructions:

- The data science team has developed ML models to help the loan department to allow their clients to check whether their loan will likely to be approved or rejected based on their certain criteria (features).

- As a DevOps engineer, you and your team needs to come out with an end-to-end CI/CD pipeline design it.

- The content of the design must include

    - Diagram that clearly illustrates what each step of the pipeline is doing.
    - States clearly in describing each step of the pipeline.
    - It should include but not limited to deployment of front end, ML models, application, database etc.

- Form in the group of not more than 6. Each group should only submit one assignment to Canvas.

Workshop 2: MLFlow (Individual)

Instructions:

- Download the Jupyter Notebook (***decisionTree-mlflow-workshop.ipynb***) and the relevant dataset (***employee_attrition.xls***)

- This is a simple machine learning model that uses ***Decision Tree Classifier*** (DCT) algorithm to predict whether a staff member will be likely to resign.

- The MLFlow portion of the Jupyter Notebook is left empty. You are tasked to make use of MLFlow to implement the following

    - Track at least 2 experiments by fine tuning the DCT model
    - Log the hyperparameters, metrics
    - Register the model
    - Load the registered model and use it to make prediction

- This is an individual assignment you are to screenshot the following

    - Experiment, run id, registered model name, version number, accuracy score, hyperparameter.

    - The prediction result and the values that you used for prediction.

- Combine all the screnshots and combine them into one ***PDF*** file and upload to Canvas.