

Individual Assignment #1 (20 points):

End-to-End Machine Learning Project:

Customer Churn Prediction Machine Learning Model

Individual Assignment (Due on 5/6)

Individual Assignment - Part A (13 points):

Build classification machine learning models in Python:

1. Develop ML models in Python, using Jupyter Notebook or any other tool of your choice. Apply any three classification algorithms of your choice (example LogisticRegression, SVM, RandomForest). Apply Data Science Process Model as a guide. **(11 points)**
2. Apply GridSearchCV to find the best hyperparameters for your models. **(optional step)**
3. Assess model performance (confusion matrix, precision, recall, ROC AUC) and interpret performance from business impact viewpoint (false negatives vs false positives). **(2 points)**

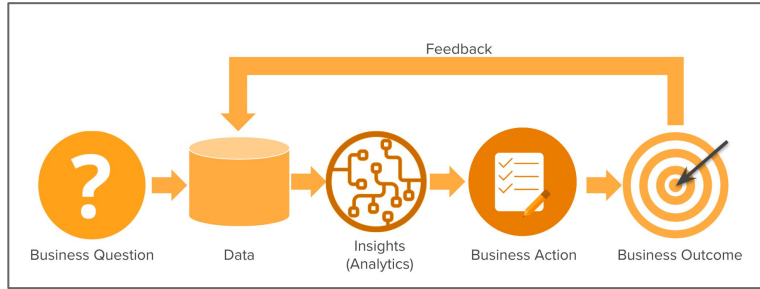
Submission Instructions:

Submit the assignment in Canvas ([Python notebook file](#)). To be fair to everyone, late submissions will NOT be accepted.

Individual Assignment (Due on 5/6)

Individual Assignment - Part B (7 points):

Prepare a project report (~7 slides with the following structure):



Big Picture

1. Intro Slide (1 point)
2. Business Question(s) (1 point)
3. Data (Exploratory Data Analysis) (1 point)
4. Insights (Predictive Analytics) (1 point)
5. Business Action (1 point)
6. Business Outcome (1 point)
7. Outro Slide (1 point)

Submission Instructions:

Submit the assignment in Canvas (PDF document) To be fair to everyone, late submissions will NOT be accepted.