Introduction to Machine Learning Project Proposal

Author: GuangBing Yang @ Mar 2, 2021

The total pages of your proposal is around 2 pages (about 750 ~ 1,000 words), no more than 3 pages. But your proposal should cover the following topics (including the citations). Lack of any part of them will be deducted 2 points. The project proposal is worth 9 points over the total 25 points of the project.

If the data sets and source code are used in your project, be cautious about the copyright and privacy policy. Do not include any sensitive and personal information in your datasets.

In addition, this project encourages you to use popular ML frameworks, such as scikit-learn, tensorflow, pytorch, etc., to implement your project. But again, you must explain how to use these techniques briefly in Section 2 and/or 3.

1. Project introduction (2 points)
    a. Motivation of this project
    b. Objective of this project
    c. Scope of the project
    d. Briefly introduce what the project is going to do, such as what the task, which algorithms will be focused on Machine Learning supervised learning, like classification problems, or unsupervised learning problems, etc.
    e. How to implement it and what will be in your demonstration and presentation
2. Background and related work (2 points)
    a. Background of techniques that you are going to use and implement
    b. What are the existing solutions for the similar or same problems, and what are the limitations of these solutions.
    c. Why your solution sounds or is a suitable one.
3. Problem definition and technical approach (3 points)
    a. What is the problem statement (a kind of research problem statement)
    b. Details about the data to be used to train and test the model, for example, where to get the labelled data, details of the datasets, etc. (Hint: a brief raw data analysis may be necessary)
    c. Details of your technical approach, including particular algorithms, mechanism of exploitation and exploration, how to train the ML model and how to evaluate the performance of the model.
4. Evaluation and expected results (2 points)

References (list all citations, use either MLA or APA style will be fine)

Reference is worth no point, but if you don't cite your sources, you will be penalized for plagiarism.