IBA4315
Term Project Guideline
Spring 2024
(updated on January 03, 2024, additional details will be discussed in class)

Project Description

In this project, you are asked to apply relevant artificial intelligence (AI) tools and techniques that you have acquired (of course, you are welcome to go beyond the scope of the course) to mine useful insights and arrive at meaningful conclusions for a real-world business application. **You are required to complete this project in groups of 4-5, delivering three (3) components:**
   1) **Term Project Proposal**
   2) **Term Project Presentation**
   3) **Term Project Final Report (with data and codes)**

The entire Term Project will contribute **40% to your overall grade**. Details of each component, its requirements, and the respective grading criteria will be specified below.

Disclaimer

1. Individuals in the same group will generally receive the same scores for all components of the Term Project, **unless feedback is received that a particular member is only superficially participating and not doing actual work**. Please voice out your concerns to the instructor if you think it is necessary.

2. You **should not be allowed to personally contact other group members** to backtrack on evaluations of the presentations.

<u>Important things to note</u>

Please name your submission documents in the following format:
   o proposal**XX.pdf** for Term Project Proposal
   o report**XX.pdf** for Term Project Final Report
   o presentation**XX.pptx** or presentation**XX.pdf** for Term Project Presentation
   o dataCodes**XX**.zip for data and codes

where **XX is your group ID**. For example, Group 1's proposal should be named as "**proposal01.pdf**". **If not, your submission will be penalized for 1 point.**

Project Component	Percentage of Project Grade	Due Date and Time	Submissions
Term Project Proposal	20%	11:59am, Mar 13, 2024 (Week 7)	PDF document
Term Project Presentation	30%	11:59pm, one day prior to your presentation	PPTX or PDF document
Term Project Final Report	50%	11:59am, May 12, 2024 (tentative)	PDF document, data & codes

I.   Term Project Proposal

You are to submit an 1-2 pages PDF document which should cover the following information

1) **Intent (identify the business problems)**
   - What's the business problem we're trying to solve?
   - How will customers, platforms, companies benefit?
   - Why are we doing this, and why is it important?
2) **Desired outcome (define the business problems)**
   - How do we measure it? What do we want to achieve?
3) **Deliverable (formulate the ML problems and solutions)**
   - How should we solve the business problem using AI techniques?

You can check the following blog to understand the importance of the one-pager before any ML project and what would be a solid one-pager. https://eugeneyan.com/writing/what-i-do-before-a-data-science-project-to-ensure-success/#first-draw-the-map-to-the-destination-one-pager

Grading Criteria
The Group Project Proposal **weighs 20%** of your project final grade (8 points). Your proposal will be evaluated based on:
   a) Concision of the introduction of your intent/desired outcome/deliverable
   b) Description of the data and data collection methods (if any)
   c) Correctness of the description of the methods you foresee applying

II. Term Project Presentation

When to submit: one day before your presentation by 11:59pm
Who to submit: A representative from each group
What to submit: PPT or PDF named as presentationXX.pptx/pdf (XX is your group ID)
Where to submit: BB > Project Presentation

1. Each group has **15 minutes for the project presentation** (10-12 minutes presentation plus 3-5 minutes Q&A). The flow and content of the presentation can follow that of the Term project Final Report. However, your presentation should be understood by itself, you may assume that the viewers have not read your project paper.

2. Focus on **identifying what is novel and interesting**. Emphasize the problems or issues being addressed. Share your understanding and experiences upon how the work is done. Have a thread, a narrative, tell a story.

3. **Avoid reading the notes or slides** when you do the presentation in the class. But you can write down the notes when you rehearse the presentation.

4. You must include the title and group members in the first page of your slides.

Grading Criteria

1. The Project Presentation **weighs 30%** of your project final grade (12 points). **Each member must present; failure to do so will result in a zero grade.**

2. The presentation will be graded by the instructor (30%), TA (30%), and other groups (40%) (those will present in the same session), based on the dimension below.
    a) The presentation was interesting and engaging.
    b) The speakers made eye contact and used their voices vividly.
    c) The group presented accurate and relevant details about the problem they were addressing.
    d) The group demonstrated a thorough understanding of the problem.
    e) The group answered questions comprehensively, clearly and directly.
    f) Please give an additional comment to the group's project.

III. Term Project Final Report

When to submit: 12 May 2024, Sunday by 11:59am
Who to submit: A representative from each group
What to submit: PDF named as reportXX.pdf and a zip file named as dataCodesXX.zip (xx is your group ID)
Where to submit: BB > Project Final Report
BB > Project Data and Codes

You are to submit an 8-10 pages PDF document that extends/continues from your Project Proposal. A suggested outline of the Final Report includes:

1) A description of the problem (what it is and motivation)
2) Some basic facts of the dataset(s)
3) A detailed discussion of the following:
    a) Pre-processing steps to sanitize/manipulate/combine your dataset(s)
    b) AI techniques or tools that you have used (e.g., neural networks, OpenAI APIs, Microsoft Azure APIs)
    c) The insights that you have gathered from applying AI techniques on the dataset(s)
    d) Conclusion (practical implications, limitations, future extensions)
    e) References: must include a bibliography listing all references (including URLs, if any) cited
4) You should also upload your code and data

Required Format

The use of 10-point Times New Roman font is mandatory. Include a title page showing your project title and group member. If the data file size is too large, submit a representative subset of the original data.

Grading Criteria

1. The project report **weighs 50%** of your project final grade (20 points). The report will not be returned to you; be sure to make your own copy if you want to keep for your record.

2. Your report will be evaluated based on:
    a) Clarity and completeness
    b) Appropriateness of the techniques and methods applied for the project
    c) Coherence and consistency of proposed problems and solutions
    d) Usefulness of your project in other similar real-world problems
    e) Concise summarization of your work
    f) Readability

All the best for your project!