

AI for Managers
Prof. Prashant Rajaram

Instructions for Group Project

A. Group Project Overview:

You need to work in your learning teams to develop a proposal for the senior board of a real-world company (preferably a company in which one of you work) to invest a specific \$ amount (>\$100,000) in an AI application that can be used at your company. In order to show benefit of the AI application, you need to show evidence of analysis that leverages **Generative AI**, and may be supplemented by Analytical AI should you choose. The data required for analysis can be (a) original data from your company, (b) disguised data from your company (for confidentiality), (c) simulated data to show use case, or/and (d) any publicly available data to show use case (e.g., <https://www.kaggle.com/datasets>). The presentations will be made in the final session#10. There is an optional team peer evaluation that you can submit on Learn (see peer evaluation form for more details).

Use the code you learn in the asynchronous modules (especially Sessions 3 & 4) as a starting point for data analysis. In addition, you may build on this further with the code (Sessions 6, 7 and 8) and concepts you learn across all other sessions to aid you in the group project. You do not need to use code/concepts from all sessions, and can choose what fits best for your project.

B. Generative AI Resources:

A. Free: Coursera Modules

- You can use your project data within the Jupyter Notebook environment in your Coursera Modules. This should be sufficient for the purpose of your group project, but you have the option to use more resources as mentioned below.

B. Free + Paid (**Optional**, only if you would like to use more resources). Complete Coursera modules to learn how to use the API keys for each of these resources:

- OpenAI (Sessions 3 & 4):
 - Provides at least \$5 in free credits for a new account with a maximum usage limit of \$100/month
 - Spend \$5 (USD) in credits that will be reimbursed by the MMA Program Office (please see document “Instructions to setup Google Colab” for reimbursement details)
 - See links on rate-limits: <https://platform.openai.com/docs/guides/rate-limits/usage-tiers?context=tier-free>
- VertexAI by Google (Session 7):
 - As part of the Google Cloud Platform, you can get \$300 in free credits for a 90 day period
 - See instructions on Google Cloud Setup within the Coursera module for Session 7.
- Lamini (Session 8)
 - New users get \$300 in free credit
 - <https://www.lamini.ai/pricing>

C. Computational Resources:

- In order to get access to faster GPUs for data analysis, the program office will be reimbursing you for a **two-month subscription** of Google Colab Pro. Please see the sheet “Instructions to set up Google Colab” for details on the subscription.
- GPUs can be especially helpful in analyzing larger datasets or if you want to supplement your Generative AI analysis with Analytical AI methods such as those that you learn in Session 6 (or those that you learn through Optional Courses in the AI for Managers catalogue on Coursera)
- **Important:** You only have 100 compute units per student per month in Google Colab. Use it judiciously. For your group project, if one student runs out of compute units, then another student in the team can start using their account for the project.

D. Group Project Action Plan

- Submit a one-page word document (+ one-page of exhibits only if needed), to demonstrate your action plan for the group project. This plan should cover the following aspects
 - Introduction about the company
 - Overview about the AI application
 - Plan for data collection
 - Plan for data analysis
- After reviewing your action plan, I will provide you with a short confirmation and/or some feedback to make sure you are progressing in the right direction for the final group project presentation.
- This submission is not graded.
- Note: For the group project, you are not expected to create a fully functioning chatbot (though you are free to do so). You only need to show evidence of analysis that leverages generative AI.

E. Group Project Presentation details:

- Maximum time: 6 minutes per team + 1.5 min for QnA
- A minimum of two students per team should present
- Students who do not present are expected to take the lead during QnA and/or contribute more in other aspects of group work (e.g., data analysis, creation of slide deck etc.)

F. Slide deck details:

- Maximum 10 slides (including title and thank you slide) + maximum 5 appendix slides
- One team member should submit the team’s presentation slides on Learn (in the Assignment tab) by the deadline mentioned on Learn.
- Recommended Structure of Slide Deck:
 - Title Slide
 - Introduction
 - Some background about the company
 - Problem Statement
 - Solution
 - Overview about the AI application
 - Data Analysis

- Concept: Demonstration of effectiveness
 - How does Generative AI help solve the problem?
- Financial Benefit and/or ROI
- Conclusion
- Appendix (referred to during QnA if needed) can have details on:
 - Data Analysis, Concept, Financial calculations etc.

G. Grading Weight:

- 75% instructor grade + 25% peer grading of other teams' presentations
- Presentations that do well in these areas will get higher grades:
 - Show evidence of original analysis: Is there a unique well-identified problem? Is there a tailor-made solution appropriate to the identified problem?
 - Use concepts learned in course (across synchronous and asynchronous modules): Is there a strong application of concepts learned in the course?
 - Demonstrate rigor in data analysis: Is the analysis rigorous?
 - Have clarity of ideas (in slide deck, oral presentation, and while answering audience questions): Is the presentation clear?
 - Display soundness of logic (in slide structure): Is there coherent flow of thought? Is there a compelling argument made to adopt the AI application?

H. FAQ: What should I do if all students in my team run out of compute units in Google Colab?

- This is unlikely to happen if you use your resources judiciously. In the unlikely event that it does, continue in the free version of Colab. However, it will give you limited GPU computing power, and can result in longer runtimes for larger datasets with frequent termination of idle sessions.
- Alternatively, use your local computer or the environment provided in your Coursera modules to run your code.
- Alternatively, simplify the data used for analysis, so that it can be feasible to compute.