Capstone

Your Capstone project is the culmination of your time at GA! You will choose a brief from the below, to assist a client with their data analytics needs:

- Option 1: OurBank Churn
- Option 2: Olist Marketing Funnel
- Option 3: City of Melbourne Parking
- Option 4: City of Melbourne Street Furniture
- Option 5: Lawpath SAAS Subscription
- Option 6: Pixc Subscription
- Option 7: Choose Your Own

This introductory document lays out the three constituent portions of the project.

Deliverables

1. Topic Proposal and Dataset
2. Report and Technical Analysis
3. Non-Technical Presentation

Capstone, Part 1: Topic and Dataset

Get started by determining and describing your problem, goals, criteria for success, potential audience(s), and dataset(s).

Provide a clear statement of the problem that your client has and an overview of your approach to solving that problem. Summarise your objectives, goals and success metrics, and any risks and assumptions. Outline any proposed methods and techniques you have.

Deliverable: Prepare a presentation with a maximum of 10 slides which introduces your client, and describes your problem, goals, criteria for success, potential audience(s), and potential dataset(s). This will form the first part of your Report Writeup.

Due: 5pm, Friday of Week 8

Capstone, Part 2: Report and Technical Analysis

Develop a technical report that can be shared among your peers.

Document your research and analysis including a summary, an explanation of your approach as well as the strengths and weaknesses in the process.

Consider delivering a combination of SQL queries, data files, a Jupyter notebook and an interactive dashboard in Tableau.

Deliverable: Your report should outline the following:

- Problem, Goals and Audiences - Provide a clear statement of the problem, goals, and criteria for success that your client has and an overview of your approach to solving that problem.
- Data Sources and Definitions in a Data Dictionary -
    - All data should be cleaned, with redundant, duplicate, and erroneous data removed.
    - Data should be clearly defined in a data dictionary.
- Patterns, Trends and Insights -
    - Data should be analysed using statistical techniques, to identify patterns, trends, and insights.
    - Include at least one interactive dashboard visualisation to provide insights to the business decisions required by the intended audience.
- At least one predictive model - Use historical data to conduct predictive analysis on new data sets based on the predictive model.
- Recommendations -
    - Find a solution to your problem - if there is one.
    - Make recommendations for your client to move forward on.
    - Outline any setbacks and make recommendations of any further data required or a new data model to be built (if required).
    - Next steps - What would you do next?

Due: 5pm, Thursday of Week 9

Capstone, Part 3: Non-Technical Presentation

Whether during an interview or as part of a job, you will frequently have to present your findings to business partners and other interested parties - many of whom won't know anything about data analysis!

With your analytical work complete, it's now time to clean up and clarify your findings. Come up with a detailed slide deck or interactive demo (or both) that explains your data, visualises your analysis, describes your approach, articulates strengths and weaknesses, and presents specific recommendations.

You will present your deck to the class and a select audience of non-technical audience for 10 minutes. Be prepared to explain and defend your presentation to an inquisitive audience!

Deliverable: Presentation of 10 minutes of your findings with a non-technical audience in mind.

Due: 9am, Friday of Week 9

Rubric

Instructors will evaluate student skill based on the following rubric. For each element, instructors will give a score between 0 and 3:

- Incomplete (0)
- Does Not Meet Expectations (1)
- Meets Expectations (2)
- Exceeds Expectations (3)

		Score
Capstone, Part 1: Topic Proposal and Dataset	Data is gathered from internal and external sources according to business requirements.	
	A problem statement and an overview of an approach to solving that problem is provided.	
	Objectives, success metrics, any risks/assumptions, and proposed techniques are summarised.	
	The presentation deck is clear and effective, and equal to or less than 10 slides.	
Capstone, Part 2: Report Writeup + Technical Analysis	All data is cleaned and described, with redundant, duplicate, and erroneous data removed.	
	Data is analysed using statistical techniques, to identify patterns, trends, and insights.	
	A predictive model is built using historical data and predictive analysis is conducted on new data sets based on the predictive model.	
	The report is built based on statistical analysis and outlines all patterns, trends and insights clearly.	
	The report facilitates data-driven decision making or understanding by effectively visualising data and summarising findings.	
	At least one interactive dashboard is created and presented to provide insights to the business decisions required by the intended audience.	
	A new data model is proposed or built (if required).	
Capstone, Part 3: Presentation + Recommendations	The presentation facilitates data-driven decision making or understanding by visualising data and clearly communicating data insights.	
	The presentation is appropriately directed to the correct audience and communicated in laypeople terms.	

You must receive a score of at least meets expectations in all categories to pass this project.