



Assessment 3 Information

Subject Code:	MBA509
Subject Name:	Artificial Intelligence Programming for Business Analytics
Assessment Title:	Business Report
Assessment Type:	Individual Report
Word Count:	1000 Words (+/-10%)
Weighting:	35 %
Total Marks:	35
Submission:	Turnitin
Due Date:	Monday, Week 12 , 23.55pm AEST

Your Task

You are required to:

1. Use Google Colab to analyse unstructured data in order to gain insights into branding and advertising techniques.
2. Write a report based on your findings.

Assessment Instructions

You need to address the below sections in a report, based on the completion of machine learning tasks (AI analysis) including image captioning, entity recognition and sentiment analysis. Your report will be based on **two award winning fragrances of your choice**.

Support: Refer to the “**Additional Instructions**” file for guidance. During class in **Week 9** your lecturer will also provide guidance on carrying out the below tasks. Please make sure you are familiar with the assessment before coming to class.

Report Sections:

1. **Unstructured data collection: (4 marks) (Reviews do not count in word count)**
 - a. Collect and reproduce 5 user reviews for each of your two award winning fragrances. Label them as negative or positive based on your own interpretation.
 - b. Collect the editorial for the 2 fragrances.
 - c. Use Google to find 2-3 advertising images for the two fragrances which are relatively sophisticated.
 - d. Use Google to find 1 advertising video for the two fragrances.
2. **Sentiment analysis (6 marks) 350 words**
 - a. For each user review, identify the corresponding AI user sentiments (positive or negative) with reference to the AI technique.
 - b. Evaluate the accuracy of the AI predicted user sentiments as compared to your own interpretation. Reflect on how AI could be used to monitor sentiment and enhance brand recognition.



3. Name Entity Recognition (5 marks) 350 words

- a. For each fragrance editorial, perform:
 - i. Named entity recognition on the fragrance editorials.
 - ii. Name entity recognition on the user reviews.
- b. Consider the AI generated named entities. Evaluate how they align with and promote the base, middle or heart, and top notes of each of the fragrances.

4. Image captioning: (10 marks) 350 words

- a. For each advertising image, write down the AI generated captions using Google Colab and appropriate algorithms.
- b. Consider the AI generated captions. Evaluate how they align with and promote the base, middle or heart, and top notes of each of the fragrances.
- c. Identify the strategies behind each of the advertisements using your intuition together with the AI captions. Reflect on what additional insights the AI captions provide.

5. Detect and predict actions in advertising video (10 marks) 300 words

- a. For each advertising video, apply Perceiver AI to predict the actions found in the video.
- b. Consider the editorial analysis, sentiment analysis, image captioning and action detection in advertising videos – reflect on how they align with and promote the base, middle or heart, and top notes of each of the fragrances.
- c. How would you use Perceiver AI to predict the popularity of fragrances?
 - i. Suggests the kinds of data that would influence the popularity of fragrances as inputs into Perceiver AI.
 - ii. Draw a diagram to show how the data could be processed by Perceiver AI.

Report layout and evidence of AI analysis

- Students do not need to write an introduction or conclusion for the report and can just address the four sections above.
- Students must provide the URL of their Google Python Colab, of the image captioning and sentiments analysis to support their answers. Ensure that:
 1. The name of the Google Colab contains your Student ID and your name.
 - a. For Image Captioning: my_student_id_fullname_image_captioning.ipynb
 - b. For Sentiments Analysis: my_student_id_fullname_sentiments_analysis.ipynb
 - c. For Named Entity Recognition and Video Detection (non-Perceiver): my_student_id_fullname_ner_video.ipynb
 - d. For Perceiver AI Video Detection: my_student_id_fullname_video_detection.ipynb
 2. Ensure the output for each step of running Python is not deleted or cleared.
 3. These elements in your report **do not count in the word count**.



Important Study Information

Academic Integrity Policy

KBS values **academic integrity**. All students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Academic Integrity and Conduct Policy.

What is academic integrity and misconduct?

What are the penalties for academic misconduct?

What are the late penalties?

How can I appeal my grade?

Click here for answers to these questions:

<http://www.kbs.edu.au/current-students/student-policies/>.

Word Limits for Written Assessments

Submissions that exceed the word limit by more than 10% will cease to be marked from the point at which that limit is exceeded.

Study Assistance

Students may seek study assistance from their local Academic Learning Advisor or refer to the resources on the MyKBS Academic Success Centre page. Click [here](#) for this information



Assessment Marking Guide

MBA509 Assessment 3	Rubric /35		
Section 1: Unstructured data collection	0-2	3-4	/4
	<p>Has achieved all or most of:</p> <p>Under 5 reviews</p> <p>1-3 relatively simple advertising images that only allows the AI to identify a few entities for analysis.</p>	<p>Has achieved all or most of:</p> <p>5 user reviews</p> <p>3 relatively sophisticated advertising images that allows the AI to identify multiple entities for a richer analysis.</p>	
Section 2: Sentiment Analysis	0-3	4-6	/6
	<p>Has achieved all or most of:</p> <p>Applied AI techniques to identify positive or negative sentiment(s) in some of the reviews.</p> <p>Judged the accuracy of AI sentiment predictions with limited evaluation of the text.</p> <p>Provided a minimal reflection on AI sentiment prediction applications.</p>	<p>Has achieved all or most of:</p> <p>Applied appropriate AI techniques to identify positive or negative sentiment(s) in each user review with clear reference to how they made the decision based on the AI technique.</p> <p>Evaluated, with reference to human intuition, the accuracy of AI sentiment predictions.</p> <p>Reflected, with reference to the task, on how AI sentiment predictions can enhance brand recognition for companies.</p>	
Section 3: Name Entity Recognition	0-3	4-5	/5



	<p>Has achieved all or most of:</p> <p>Applied AI techniques to at least one of the editorials and some user reviews.</p> <p>Identify entities in some fragrance editorials and user reviews.</p> <p>Provided a minimal reflection on AI sentiment prediction applications.</p>	<p>Has achieved all or most of:</p> <p>Applied appropriate AI techniques to identify named entities.</p> <p>Evaluated, with reference to human intuition, the accuracy of AI sentiment predictions.</p> <p>Reflected, with reference to the task, on how AI sentiment predictions can enhance brand recognition for companies.</p>	
Section 4: Image Captioning	0-5	5-10	/10
	<p>Has achieved all or most of:</p> <p>Applied AI techniques to identify worded captions.</p> <p>Judged the accuracy of AI predictions with limited evaluation of the text.</p> <p>Provided a minimal reflection on AI sentiment prediction applications.</p>	<p>Has achieved all or most of:</p> <p>Applied appropriate AI techniques to identify worded captions in advertising images with clear reference to how they made the decision based on the AI technique.</p> <p>Evaluated, with reference to human intuition, the accuracy of AI worded captions or predictions.</p> <p>Reflected, with reference to the task, on how AI predictions can enhance brand recognition for companies.</p>	
Section 5: Predict actions in advertising videos	0-5	5-10	/10



	<p>Used Perceiver AI to predict actions in 1 advertising video.</p> <p>Consider the editorial analysis, sentiment analysis, image captioning and action detection in advertising videos – and made minimal reflection on how they align with and promote the base, middle or heart, and top notes of each of the fragrances.</p>	<p>Explained how AI techniques can be used to predict fragrance popularity. Identified and justified relevant features that could influence the popularity of fragrances.</p> <p>Provide a drawn diagram.</p> <p>Consider the editorial analysis, sentiment analysis, image captioning and action detection in advertising videos, and reflected on how they align with and promote the base, middle or heart, and top notes of each of the fragrances.</p>	
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