Business Intelligence

Assignment 3: Data Analytics

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1 BUSINESS UNDERSTANDING

* 1. Define and describe the data source and a scenario in which a business analytics task based on the data set you identified should be solved.

The data source that we have selected, “Hotel Booking Demand”, provides a complete set of information related to city hotels and resort hotels.

The information we can find in the data set is an insight on the booking details, non-personal information of the tenants, and some details about the reservation status. This includes hotel information such as name, location, and type; booking information such as arrival and departure dates, number of guests and special requirements; guest information, such as how far in advance the booking is made and the number of guests for adults, children, and infants as well as the booking status indicating whether the booking has been cancelled.

The scenario we want to study and analyze is based on the attribute of the Average Daily Rate (ADR). This attribute measures the average rental revenue earned for an occupied room per day. The operating performance of the hotels can be determined by using the ADR. This measure is crucial because is one of the key indicators of a hotel financials’ health. Having this into consideration, our case study will consist of trying to predict this indicator by using a regression model.

* 1. Clearly define and describe the Business Objectives.

(REESCRIBIR + TRADUCIR)

* Optimización de Ingresos:
  + Objetivo: Identificar los factores que más influyen en el ADR y utilizar esta información para desarrollar estrategias de precios que maximicen los ingresos del hotel.
* Reducción de Cancelaciones:
  + Objetivo: Evaluar cómo las variaciones en el ADR afectan las tasas de cancelación y desarrollar estrategias para minimizar cancelaciones.
* Predicción del ADR Futuro:
  + Objetivo: Desarrollar un modelo predictivo basado en la regresión para estimar el ADR futuro, permitiendo una planificación más precisa y la anticipación de tendencias de ingresos.

1.3 Clearly define and describe the Business Success Criteria.

1.4 Clearly define and describe the Data Mining Goals.

1.5 Clearly define and describe the Data Mining Success Criteria.

1.6 Are there any AI risk aspects that may require specific consideration?

The updated template, user manuals, samples, and required fonts, all are available at the URL <https://www.acm.org/publications/proceedings-template>. It contains said information for all three versions of MS Word (Windows and 2 versions of Mac). There are also separate links to the user guide, which can be referred to by the user. This URL also contains some useful video links, which describe how to add the template, structure the paper, and generate the layout, in different clips. **Display Formula with Number**

 (1)

**Continuation part of Paragraph Text** The user must style this paragraph in **ParaContinue** style, which follows immediately after the **DisplayFormula** (numbered equation). The **DisplayFormula** style is applied only in case of a numbered equation. A numbered equation always has a number to its right. Insert paragraph text here. **Display Formula without Number**



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Figure 1: Figure Caption and Image above the caption [In draft mode, Image will not appear on the screen]

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1.1 Heading Level 2

In the below paragraph, it is explained how alt-txt value is placed in **MS Word 2010**. To add alternative text to a picture in Word 2010, follow these steps:

1. In a Word 2010 document, insert a picture.
2. Right click on the inserted picture and select the **Format Picture** option.
3. Select the **Alt Txt** option from the left-side panel options.
4. In the "Title:" and "Description:" text boxes, type the text you want to represent the picture, and then click "Close".

Below are steps to place alt-txt value in **MS Word 2013/2016**. To add alternative text to a picture in Word 2013/2016, follow these steps:

1. In a Word 2013/2016 document, insert a picture.
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3. In the settings at the right side of the window, click on the "Layout & Properties" icon (3rd option).
4. Expand **Alt Txt** option.
5. In the "Title:" and "Description:" text boxes, type the text you want to represent the picture, and then click "Close".

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REFERENCES

[1] Patricia S. Abril and Robert Plant, 2007. The patent holder's dilemma: Buy, sell, or troll? *Commun. ACM* 50, 1 (Jan, 2007), 36-44. DOI: <https://doi.org/>10.1145/1188913.1188915.

[2] Sten Andler. 1979. Predicate path expressions. In *Proceedings of the 6th. ACM SIGACT-SIGPLAN Symposium on Principles of Programming Languages (POPL '79)*. ACM Press, New York, NY, 226-236. DOI:https://doi.org/10.1145/567752.567774

[3] Ian Editor (Ed.). 2007. *The title of book one* (1st. ed.). The name of the series one, Vol. 9. University of Chicago Press, Chicago. DOI:https://doi.org/10.1007/3-540-09237-4.

[4] David Kosiur. 2001. *Understanding Policy-Based Networking* (2nd. ed.). Wiley, New York, NY..

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