

**BUSINESS CASES WITH DATA SCIENCE**

**MASTER DEGREE PROGRAM IN DATA SCIENCE AND ADVANCED ANALYTICS – MAJOR IN BUSINESS ANALYTICS**

**<TITLE>**

<Group Alias>

<First student name>, number: <student number>

<Second student name>, number: <student number>

<Third student name>, number: <student number>

<Fourth student name>, number: <student number>

<Month>, <Year>

INDEX

[1. INTRODUCTION 1](#_Toc34587927)

[2. BUSINESS UNDERSTANDING 2](#_Toc34587928)

[2.1. Background 2](#_Toc34587929)

[2.1.1. Level 3 title 3](#_Toc34587930)

[2.2. Business Objectives 3](#_Toc34587931)

[2.3. Business Success criteria 3](#_Toc34587932)

[2.4. Situation assessment 3](#_Toc34587933)

[2.5. Determine Data Mining goals 3](#_Toc34587934)

[3. PREDICTIVE ANALYTICS PROCESS 4](#_Toc34587935)

[3.1. Data understanding 4](#_Toc34587936)

[3.2. Data preparation 4](#_Toc34587937)

[3.3. Modeling 4](#_Toc34587938)

[3.4. Evaluation 4](#_Toc34587939)

[4. RESULTS EVALUATION 5](#_Toc34587940)

[5. DEPLOYMENT AND MAINTENANCE PLANS 6](#_Toc34587941)

[6. CONCLUSIONS 7](#_Toc34587942)

[6.1. Considerations for model improvement 7](#_Toc34587943)

[7. REFERENCES 8](#_Toc34587944)

[8. APPENDIX (OPTIONAL) 9](#_Toc34587945)

THIS IS JUST AN EXAMPLE OF THE INDEX. FEEL FREE TO CHANGE THE STRUCTURE

# 

# INTRODUCTION

This word file provides a "standard" proposal structure. The format of the report (headers, spacings, fonts, and other formations) should be employed as defined in this template. However, students may change the structure and the headers according to their needs.

The report can be written in English or Portuguese.

In the case references point to the “source code” make sure the code is correctly annotated.

All bibliographic references should be presented in the APA standard; this standard also applies the formatting of references and respective forms of referencing throughout the text[[1]](#footnote-1).

# BUSINESS UNDERSTANDING

## Background

Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables.



Figure 2.1 – Illustrative figure

Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables.

|  |  |
| --- | --- |
| **Title** | **Title** |
| Text | Number |
| Text | Number |
| Text | Number |

Table 2.1 – Illustrative table

Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables Sample text with the inclusion of figures and tables.

### Level 3 title

Example of unnumbered list:

* Item 1
* Item 2
* Item 3

#### Level 4 title

Example of numbered list:

1. Item 1
2. Item 2
3. Item 3

## Business Objectives

State project objectives in business terms.

## Business Success criteria

Describe the criteria to evaluate the success of the project.

## Situation assessment

Describe available resources, including personnel, data, and computing resources and software.

If applicable, describe also risks and contingencies, terminology, and costs and benefits.

## Determine Data Mining goals

State project objectives in technical terms.

# PREDICTIVE ANALYTICS PROCESS

Describe only the major steps involved in the process. Do not replicate what is already described in the Notebook. If necessary reference the reader to the Notebook.

## Data understanding

Bla, bla.

## Data preparation

Bla, bla.

## Modeling

Bla, bla.

## Evaluation

Results described in technical terms (e.g., reached an Accuracy of 95%).

# RESULTS EVALUATION

Describe the degree to which the model meets the business objectives. If that cannot be done without the application of the model in a real environment, describe how could that be done.

Assess the data mining results in respect to the business success criteria.

# DEPLOYMENT AND MAINTENANCE PLANS

We understand that the process of implementing the model is very critical. Hotel’s market is very dynamic, and the booking are changing every day. Every day, there are new bookings on the systems, cancellations or/and changes on the reservations on-the books. So, we understand that it would be very important to implement the model integrated with the hotel reservation system. Integrating both, the results will be generated in a daily basis and the hotel could react faster to the cancellations.

Another important point is the data. We have some problems of quality in the data. We advise to improve the quality of variables Deposit Type and country. We also find some reservations with no guests. Also, on the data provided we find a good percentage of very similar booking that can reduce the performance of the model.

We are going to monitoring the performance of the model after it is implemented for some months and make some adjustments if necessary.

We also suggest an update on the model from time to time because the behaviors of the customers even the market trends can change reducing the model performance.

# CONCLUSIONS

Final remarks on the project.

## Considerations for model improvement

Bla, Bla

# REFERENCES

Author, A. A., Author, B. B., & Author, C. C. (Year). Title of article. *Title of Periodical, volume number* (issue number), pages.

# APPENDIX (OPTIONAL)

1. Example of a footnote. [↑](#footnote-ref-1)