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IBM Data Science Professional Certificate Final Capstone Project

Strategic Analytics Research about Wellness and Real Estate in the City of Paris

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Executive Summary:

The conducted study aims at answering to the research question: "Can we assess qualitatively and quantitatively the different boroughs of the city of Paris from a real estate point of view based on their Wellness score ?". In order to answer to this question, a data science methodology starting from defining the analytic approach to be adopted until modeling and evaluation stage passing by defining data requirements, data collection and data understanding and preparation. The answers are brought among others in the form of Choropleth Maps, bar charts and ranked lists. The data analysis and built models assessed the Parisian neighborhoods with the highest potential from a real estate point of view taking into account 3 major constraints which are: Quality/price ratio, quality of life score and vicinity from wellness accommodations.

Table of Figures

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1. Introduction

The current report provides a strategic data analysis of the real estate in the city of Paris. More specifically, the conducted study will focus on the real estate in the city of Paris and the assessment of their quality based on their proximity to Wellness facilities and accommodation in the mentioned city.

This study is performed in the framework of the organisation of the Olympic Games in Paris in 2024. In fact, due to this event, Business Intelligence Agencies are giving this topic a high priority. In fact, having a sharp strategic insight among the best real estate opportunities that are well located wrt Wellness facilities is of high importance for this kind of events. Indeed, such information is priceless for numerous stakeholders like: French governmental decision makers, international Olympic committees that are participating the event a well as real estate investors that are willing to levrage the event in an optimum way.

The conducted study leverages data from different sources and used different Data Science techniques in order to extract actionable and effective insights from it. The final objective of the conducted study is to provide quantitative and qualitative assessment and ranking of the different boroughs of the city of Paris based on their score regarding the following combined criteria of each borough:

- House price
- Its assessment score by current and former residents
- Wellness score based on the wellness venues that it has

The research question can be summarized as the following: "Can we assess qualitatively and quantitatively the different boroughs and neighborhoods of the city of Paris from a real estate point of view based on their Wellness score ?".

The current report is built by respecting the typical Data Science Report, hence it contains the following sections:

- Cover page
- Table of contents

- Introductory section
- Methodology section
- Results section
- Discussion section
- Conclusion section
- References
- Acknowledgment
- Appendix

2. Methodology

3. Results section

4. Discussion section

5. Conclusion section

6. References

7. Acknowledgment

I would thank sincerely IBM and Coursera for providing me this opportunity to have such a high level course quality regarding Data Science and Machine Learning topics. I also would think all the data providers of the sources that were used to make this study possible.

8. Appendix