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| Sydney Airbnb Executive Summary |
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# Abstract

In this document, we introduce, Sydney Airbnb, an advanced property analysis tool that empowers users to gain comprehensive insights into real estate dynamics effortlessly. Tailored for simplicity and precision, this software offers an array of indispensable features. Users can seamlessly generate detailed reports for a specified suburb over a selected timeframe, providing a holistic view of property listings. The dynamic charting functionality enables the visualization of price distributions, fostering a nuanced understanding of market trends.

Additionally, our software excels in keyword-driven searches, allowing users to retrieve records matching specific criteria, such as amenities like a pool or pet-friendly options. Delve deeper into customer sentiments by analyzing cleanliness-related comments, leveraging the capability to identify multiple keywords associated with cleanliness factors.

Efficiency is paramount, and Sydney Airbnb excels in delivering targeted results. Users can effortlessly obtain the total count of apartments with a specified bedroom number, such as 3, streamlining property selection. Elevate your property analysis experience with Sydney Airbnb, where data-driven decision-making meets user-friendly functionality.

# Introduction

In response to the evolving real estate landscape influenced by inflation and fluctuating interest rates, Sydney Airbnb, aims to empower investors and real estate agencies to make well-informed decisions. Focused on the Sydney market, the app leverages Airbnb dataset insights, providing a comprehensive tool for assessing short-term accommodation leasing trends. Real estate agencies can utilize this platform to guide investors on profitable choices and assist homebuyers in making informed decisions about property purchases.

This report serves as a project overview and scope document for the creation of an application under the Sydney Airbnb initiative. The primary purpose is to provide a clear understanding of the project's goals and the functionality of the software. It has a formal distribution of work for the given time to complete it made using the Gantt Chart and Work Breakdown Structure (WBS).

This document explicitly mentions the specific date range covered by the data i.e., 17th Dec 2018 to 6th Dec 2019, but it mentions that the application will allow users to select a "user-selected period" for various analysis tasks. The actual date range would be determined by users when they interact with the application. Other inputs made by the user will be dependent on the output they are seeking, for instance, the listings in a specific suburb can be found if the user inputs the time range and suburb name specifying the location of interest. From a budgeting point of view, the user can input the timeframe and no of suburbs outputting mean prices for each suburb.

The focus of the application is on data retrieval and visual display, allowing users to define search parameters and analyze records containing specific keywords. Technologies used to build the application include Python 3, Anaconda, Tkinter (a GUI toolkit for Python), dataframe (for database operations), and Excel (for data analysis and visualization).

In summary, this report sets the stage for the development of a software application focused on Airbnb data analysis in Sydney, to help real estate workers find the details of a property within a specific suburb, and price details.

Analysis 1: Listings All Records

The application will provide information on all Airbnb listings in a specified suburb for a user-selected period.

Based on the requirements of your dataset, put the results of your analysis of a 12-month date period for each of the required functionalities in these sections. Change the title names to reflect your dataset and the analysis being performed. You may include images from your program as well as your own description of the results.

Analysis 2: Distribution of Prices Chart

Users can select a period, and the application will generate a chart showing the distribution of property prices in specified suburbs.

Analysis 3: Search Keywords

Users can enter keywords (e.g., "pool," "pet"), and the application will retrieve records containing those keywords within a specified period.

Analysis 4: Count of Keywords

The application will retrieve customer comments related to cleanliness, and multiple keywords may be associated with cleanliness.

Analysis 5: Number of Bedroom in Apartment

Users can select a period, and the application will report the number of listings in a specified suburb.