Title:

"Apartment for Rent Classified”

Course: Data Science (DS-2001)

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PART 1: Dataset Description

1. Problem Statement

The goal of this project is to analyze and predict characteristics of apartments for rent, particularly focusing on key factors such as rental prices, square footage, and location. By understanding the features that impact rental prices and apartment preferences, this analysis can help property managers, real estate agencies, and potential renters in making informed decisions. In addition, predictive models created from this dataset could help in estimating rental prices and suggest the most relevant apartments to prospective renters based on their preferences.

2. Source of the Dataset

The dataset is sourced from the UCI Machine Learning Repository, known for its curated collection of datasets across various domains. This repository supports research and educational projects.

3. Dataset Summary

This dataset comprises **10,000 apartment rental listings** with **22 columns**, capturing key details about each apartment's price, size, location, and amenities. Each listing includes essential features such as the number of bedrooms and bathrooms, rental price, square footage, and specific location data (city and state). Additional information like listing descriptions, availability of amenities, and pet policies provides further context about each apartment.

The **target variable** for analysis and prediction in this dataset is **price**, which reflects the rental cost of each listing. Some columns, such as "amenities" and "pets allowed," contain missing values, which may require preprocessing. This raw data is suitable for exploring rental trends, analyzing factors that influence pricing, and building predictive models to assist potential renters and property managers in making informed decisions.

4. Attribute/Variable Description

Attribute Name	Non-Null Count	Data Type	Description
id	10,000	Int64	Unique identifier for each listing
category	10,000	object	Category of the apartment (e.g., rental type).
title	10,000	object	Title or brief description of the listing
body	10,000	object	Full description of the

			apartment, providing additional details.
amenities	6,451	object	List of amenities available in the apartment, if provided.
bathrooms	9,996	float64	Number of bathrooms in the apartment.
bedrooms	9,993	float64	Number of bedrooms in the apartment
currency	10,000	object	Currency in which the price is listed.
fee	10,000	object	Information on additional fees, if any.
has_photo	10,000	object	Indicates whether the listing includes a photo.
pets_allowed	5837	object	Indicates if pets are allowed in the apartment.
price	10,000	Int64	Rental price of the apartment.
price_display	10,000	object	Displayed format of the rental price
price_type	10,000	object	Type of price (e.g., monthly or per square foot)
square_feet	10,000	Int64	Total area of the apartment in square feet.
address	6,673	object	Full address of the apartment.
cityname	9,923	object	City where the apartment is located.
state	9,923	object	State where the apartment is located
latitude	9,990	float64	Latitude coordinates of the apartment.
longitude	9,990	float64	Longitude coordinates of the apartment.
source	10,000	object	Source platform or website of the listing.
time	10,000	Int64	Time of listing (timestamp or date format)