

# FINAL PROJECT – PROJECT PROPOSAL

**Group No.:** 6

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## Project Introduction

This project aims to analyze the “Portugal Properties- Rent, Buy, and Vacation” dataset. This dataset contains relevant knowledge about real estate listings, such as property details, location, pricing, conditions, and what market the property is directed to. With this project it’s expected to explore how the factors listed before affect the housing market in Portugal.

## Motivation

The motivation behind this project comes from different points of view. First, there is a clear interest in a housing market analysis as mean to obtain real estate insights for buyers and sellers, helping both parties make informed decisions. As real estate represents a significant investment for many it also within the scope of this project to aid in identifying valuable properties and determining elements that influence their values. Besides, this analysis can also be helpful in assessing how location plays an important role in the price points of housing in Portugal. As a whole this analysis is motivated by finding advantageous data-driven insights and recommendations based on the real estate dataset.

## Project Objectives

We believe that by achieving the following goals, the project will be able to offer a comprehensive analysis of the real estate market in Portugal, assist with decision making and understand trends.

1. Data Preparation: Clean and process the data contained in the dataset to ensure quality, including handling missing values, outliers, and formatting issues.
2. Exploratory Data Analysis: Conduct a thorough EDA to understand property market trends in Portugal based on the features under exploration.
3. Price determining factors: Find out what are the features that mainly influence property prices.
4. Property Type Analysis: Examine the number and type of properties available for rent, sale, or vacation, and analyze their pricing.
5. Location Findings: Explore how properties vary from each other on different regions of Portugal, providing location-based insights.
6. Prediction Models: Build a predictive model to estimate property prices based on property types, prices, locations, and conditions and evaluate the models' accuracy.
7. Conclusions: Based on the findings draw conclusions with regards to the Portuguese housing market.