**EXECUTIVE SUMMARY**

This business analysis executive summary is commissioned to examine the unknown trends and patterns of the data from real estate company based in California. It contains geographical and demographic data for each district/block. The goal is to find ways to improve not only revenue, but observe which factors are correlated with housing prices in order to attract more consumers. This report identifies these factors, and provides the company with useful results and insights.

The research draws attention to the analysis of the predicting variables for both geographic and demographic data in relation to the target variable house prices, using Python statistical programming. Data drawn from the California census in 1990 presents 20641 observations, and 10 variables. The variables in question include longitude, latitude, house median age, total rooms, total bedrooms, population, households, median income, and ocean proximity. All said variables will be tested with target variable, median house price. Throughout the analysis, correlation heat maps suggest a strong collinearity between total rooms, total bedrooms, population, and households. This made all four variables insignificant to median house price. Further analysis through linear regression produced the results that longitude, latitude, house age, income, and ocean proximity are all very significant in predicting house prices. Out of these factors, consumer’s income, and location variables longitude and latitude are most significant, and seem to be the major influencers of house prices in California.

It is recommended that Real Estate Company take less into account of those variables such as total rooms, total bedrooms, population, and households, as they tend not to determine the cost of the house. They should adopt a method which will take into account the house’s location, the customers’ income, age of the house, and ocean proximity, when predicting and coming up with the selling house price. Further analysis is shown in the full report, showing the importance and influence of the factors on house pricing in California, and how to maximize these profits.