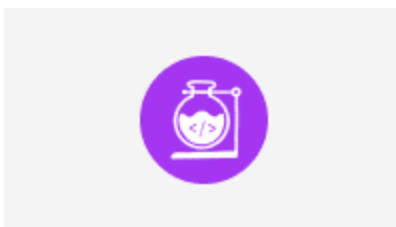# Analyze Real Estate Prices with Linear Regression and Hypothesis Testing Using Python

udemy.com/labs/analyze-real-estate-prices-with-linear-regression-and-hypothesis-testing-using-python/project-overview

Your project assignment

YM

Your Manager

Nov 25, 4:33 PM

Hi Tejashree! Thanks for working on this project for our team.

Next week our CEO will meet with a large and potentially new business partner. In the meeting, he will highlight our long-term experience and in-depth understanding of the Taiwanese residential property market. In particular, he will outline and explain the major factors driving real estate prices in Taipei. While having plenty of qualitative data at hand, our CEO needs a rigorous quantitative/statistical analysis to back his claims and he has asked our Finance & Analytics team to provide one.

Your colleagues have already collected a dataset (transactions.csv) with realistic transactions for the years 2012 and 2013. The dataset was prepared manually. So you should be on the watch for missing data, as well as duplicates, and handle them properly. As our quantitative analyst, your task is to define and fit a Linear Regression model that explains house prices based on independent factors, like age or distance, to the next MRT station. You should then test the importance of independent factors in explaining these prices. You need to conduct Hypothesis Testing on the Regression Coefficients at the 5% Significance Level. I recommend working with Python (Pandas, Numpy, Matplotlib, Seaborn, and Statsmodels) for this project. Remember, the final model should have a Coefficient of Determination (r-squared) of at least 70% and must be free of common regression issues such as multicollinearity. Finally, please prepare a high-level summary report for our CEO pointing out if (and how) these factors significantly influence house prices.

How you'll work

Your project has been broken into a set of tasks. To complete these tasks, use the provided workspace. You can launch your workspace by clicking below or using the button in the top right of the screen.

Each task includes step-by-step instructions as well as helpful documentation and necessary assets in the Resources section.

See your tasks