

## Problem Teardown:-

- We are given a dataset of house prices with some features like number of bathrooms, number of bedrooms etc.
- Our task is to create a model which will predict the price for any new house by looking at the features
- While learning about Machine Learning it is best to actually work with real-world data, not just artificial datasets.
- There are hundreds of open datasets to choose from.

## Getting Started:-

- What business objective and end goal? How will dragon real estate benefit from this model?
- Mr Joseph tells Harry that Dragon real estates will use this model to predict the house prices in a given area and will invest in area if its undervalued
- Harry should ask Mr. Joseph, what does the current solution look like? The answer is - Manual experts who analyze the features
- The predictions made by so called “experts” are not very good (error rate is 25%) which is why dragon real estates pvt. Ltd. is counting on Harry

## Finding the type of Model to Build:-

- **Supervised**, Unsupervised and Reinforcement Learning
- Classification task or **Regression task**
- **Batch learning** or online learning techniques

## Selecting a Performance measure:-

- A typical performance measures for regression problems is the Root Mean Squared Error (RMSE)
- RMSE is generally preferred performance measure for regression tasks, so we choose it for this particular problem we are solving for Dragon real estates pvt.ltd
- Other performance measures include Mean Absolute Error, Manhattan norm, etc but we will use RMSE for this problem

## Checking the Assumptions:-

- It is very important for Harry to check for any assumptions he might have made and correct them before launching the ML System
- For example, he should make sure that the team needs the price, and not categories like expensive, cheap, etc.
- If latter is the case, formulating the problem as a regression task will be counted as a big mistake
- Harry talked to Dragon real estate team members and ensured that he is aware of all assumptions