Topic of the project

" Housing Rate Prediction by ML Modelling "

Why is the particular topic chosen?

In the existing system every stakeholder in the contract must be present physically. All the documentation work, the exchange of capital, legal notices and many more things are needed to be done. This requires plenty of everyone's time and frequent meetings. Apart from this more or less few illegal practices also takes place during the entire process. So, to mitigate the malpractices, to save time of the dealers and to provide the buyers with plenty of choices we are implementing the machine learning module.

Introduction

Housing price ranges are of great interest for both buyers and sellers. Most of the people face problems while buying a new house or selling a property due to lack of contacts, and unaware of the current market scenario. Here comes the role of real estate agents or say realtors / brokers.

When a seller wants to put their property up for sale, they'll generally contact real estate agents who use their knowledge of the market to accurately price the property, list it and market it to potential buyers. And on the other hand, buyers also turn to them when they're in the market to buy a property, such as a home or a new office space.

People trust the agents as they know the ins and outs of the real-estate market, they can use their expertise to match the buyer with a property best suited for their needs and most importantly they are licensed users.
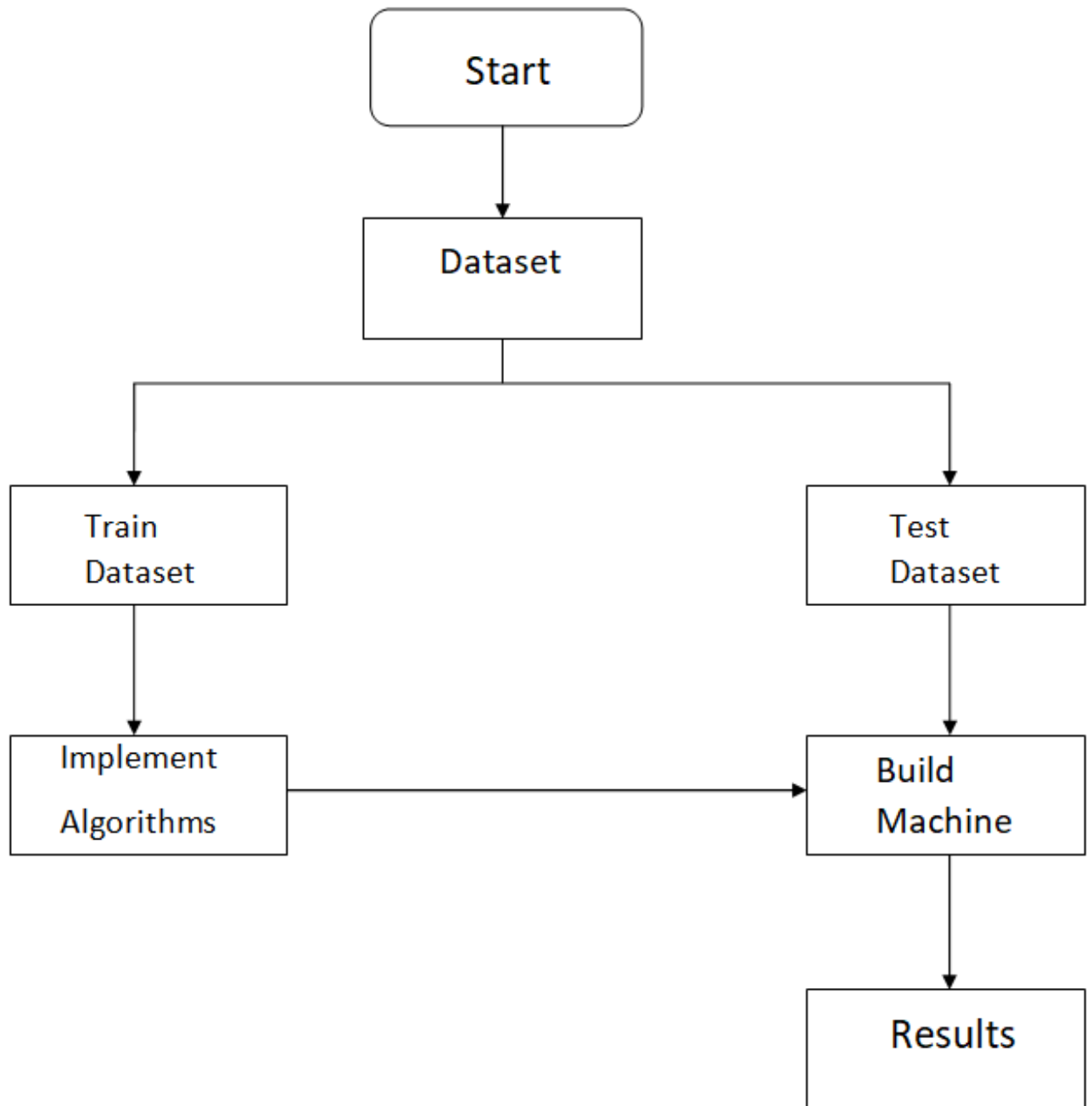
Objective and Scope

Data Science is the process of making some assumptions and hypothesis on the data, and testing them by performing some tasks. This system can store the data of various buildings along with their appearances and features.

- ➢ As we enter into the system the buyer is supposed to enter his desired requirements (features). And then these inputs are given to machine for further process.
- ➢ The main motto is to minimize the difference between the predicted and the actual ratings.
- ➢ Then apply data pre-processing and preparation techniques to obtain clean data. By building a machine learning model it will help to predict accurate prices based on house features.

As machines can predict more accurately than human-mind we'll use Machine Learning concept to implement this system. Mainly the machine would be a supervised learner working with regression testing. Features will be taken as an input by machine and depending upon this it will predict price of the house.

Intended data will be collected from experts, builders or if available online then it can be considered too. As of now as we are developing a small model the testing region will also be small.

Methodology

```
                    ┌─────────────┐
                    │    Start    │
                    └─────────────┘
                           │
                           ▼
                    ┌─────────────┐
                    │   Dataset   │
                    └─────────────┘
```

Requirements

Operating System : Windows 2000 or later version

IDE : Pycharm

Interpreter : Python

Modules/Tools : Pandas, Matplotlib, Numpy, SciPi, SciKit Learn

Conclusion

The main goal is to provide customers with best accurate predictions to set the pricing of the building and to save their time from hustles. The right real estate prices are the essence of the market and we want to ensure that using this model. Since there is a greater need for good long-term data analysis about land price, general land market behaviour and spatial development, the results produced in this research may be of great use for Government and non-Government agencies which involve in land administration.