

زهراء عادل

Msc. Mohammed Maithem Supervisor

House Price Prediction using Machine Learning

Abstract

Machine Learning has emerged as a transformative technology across various domains, including speech recognition, product recommendation systems, healthcare, and automotive safety. Recognizing its significance, we aim to integrate Machine Learning into our project to address challenges in the real estate market. In this highly competitive market, where pricing fluctuates frequently, buyers face the dilemma of purchasing a home without accurate predictions of future market trends, leading to potential losses. Therefore, our project's primary objective is to develop a robust house price prediction model that provides accurate estimations without any loss. This model will consider numerous factors influencing house prices and tailor predictions to individual budgets and preferences. By employing Machine Learning algorithms such as Linear Regression, Decision Tree Regression, K-Means Regression, and Random Forest Regression, we aim to deliver efficient pricing solutions to customers, eliminating the need for intermediaries. Our research findings indicate that Random Forest Regression offers the highest accuracy among the considered algorithms. This project not only revolutionizes the way house prices are determined but also empowers individuals to make informed investment decisions in real estate, ultimately enhancing their financial well-being.