Real Estate Data Analysis using PCA

Abstract:

A key challenge for property sellers is to determine the sale price of the property. The ability to predict the exact property value is beneficial for property investors as well as for buyers to plan their finances according to the price trend. The property prices depend on the number of features like the property area, basement square footage, year built, number of bedrooms, and others. The prices can be predicted more accurately if the number of predictors is less. Several dimension reduction techniques are being applied to decrease this number of predictors.

Problem Statement:

Read the youtube data and perform exploratory data analysis.

Dataset Information:

With 79 explanatory this dataset describes (almost) every aspect of residential homes in Ames, Iowa

Variable Description: Please refer to the data description text file provided

Scope:

- Compute Principal Component from scratch
- Compute Principal Component using sklearn

Learning Outcome: The students will get a better understanding of how to compute principal components from scratch as well as using the sklearn library. They should be able to implement PCA under exploratory data analysis.