Assignment 3 – non-linear relationship

- Use the same dataset , California Housing details, and use the notes from assignment 2.
  In this assignment also y – value is in column median_house_value.
  Perform the following transformations :
  - Normalize all input features using Z-score normalization
  - Add 3 new features to capture the non-linear relationship of existing features.
    Explain the reasoning for your selection of features

Feature selected	Reason for selection	Selected derivation function	Reason for selection this derivation
Feature 1 :			
Feature 2:			
Feature 3 :			

Capture the following details by running experiments with different derivation functions on different features

Experiment 1 : add the details on feature selection in the following table

Feature selected	Reason for selection	Selected derivation function	Reason for selection this derivation
Feature 1 :			
Feature 2:			
Feature 3 :			

Run details

Run number		Most appropriate learning rate	½ MSE	R square	Does it converge	Number of iterations for convergence	Run specific comments
1							

Experiment 2 :

Feature selected	Reason for selection	Selected derivation function	Reason for selection this derivation
Feature 1 :			
Feature 2:			
Feature 3 :			

Run details

Run number		Most appropriate learning rate	½ MSE	R square	Does it converge	Number of iterations for convergence	Run specific comments
1							

Experiment 3 :

Feature selected	Reason for selection	Selected derivation function	Reason for selection this derivation
Feature 1 :			
Feature 2:			
Feature 3 :			

Run details

Run number		Most appropriate	½ MSE	R square	Does it converge	Number of iterations for	Run specific comments

		learning rate				convergence	
1							