A Basic Study of Defect Occurrence Prediction with DML using the Variables of Number of Householders, Unit Size and Heights of Apartment in Korea

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Abstract: *In Korea, from 2000's defect lawsuits on apartment housing have become serious social problems and a great amount of social expense is being wasted. In defect disputes, the amount of judgment on apartment building defects is the most important key in a lawsuit.*

As the amount of judgment in defect lawsuit depends on how many defects occur in the apartment buildings. to apartment suppliers(esp. construction company) predicting how many defects are occurred in constructed apartment complex is a very important factor in the management of the business. .

In this research, we try to predict the frequency of defects the defect occurrence frequency using R, popular software of the DML(Deep Machine Learning Techniques) on complex variables of number of apartment householders, unit size and heights of apartment on the 1st year finish work defects. The analysis showed that the difference rate between the actual occurred value and the predicted value was 22.08 % on the variable of heights of apartment and 41.09% on complex variables of number of apartment householders, unit size and apartment height.

Keywords: *Defect Occurrence Prediction, Householders, Heights of Apartment in Korea*