

Pavement deflection data are often used to evaluate a pavement's structural condition nondestructively. Pavement layers are important parameters in view of bearing capacity. Pavement layer thickness may be known from the design project or site investigation. At the same time, using backcalculation analysis, flexible pavement layer thicknesses together with in situ material properties can also be backcalculated from the measured field data through appropriate analysis techniques. Data mining (DM) process has not been used as a backcalculation tool before. In this study, DM process is used in backcalculating the pavement layer thickness from deflections measured on the surface of the flexible pavements. Experimental deflection data groups from NDT are used to show the capability of the DM process in backcalculating the pavement layer thickness and compared each other. Performing the study, modeling with Kstar method gives fine results with respect to other DM modeling techniques. Backcalculation of pavement layer thickness using DM process has been carried out for the first time.