Decision support in machine vision system for monitoring of TFT-LCD glass substrates manufacturing with data mining techniques

유 준*, Ali Yousefian[1]
부경대학교;
[1]Seoul National University Department of Bioengineering
(jayliu@pknu.ac.kr*)

This work presents an industrial application of a new machine vision methodology to manufacturing of TFT-LCD glass substrates. Careful observation and interpretations of the results from the methodology enable one to automatically monitor the visual quality of the products. Especially, introducing a multi-objective function in designing a classifier makes it possible to achieve a manufacturing goal. Also this presentation provides some important issues in data mining such as handling imbalanced training data and feature selection. New methods such as SMOTE (Synthetic Minority Over-sampling Technique) and PGA (Parallel genetic Algorithm) are employed to handle these issues successfully.