

عنوان مقاله:

Phase II Logistic Profile Monitoring

محل انتشار:

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تعداد صفحات اصل مقاله: 8

نویسندگان:

Abbas Saghaei - Islamic Azad University-Science and Research Branch

Maryam Rezazadeh-Saghaei - Parsian Quality and Productivity Research Center

Rassoul Noorossana - Iran University of Science and Technology

Mehdi Dorri - Islamic Azad University-South Tehran Branch

خلاصه مقاله:

In many industrial and non-industrial applications the quality of a process or product is characterized by a relationship between a response variable and one or more explanatory variables. This relationship is referred to as prof'de. In the past decade, prof'de monitoring has been extensively studied under the normal response variable, but it has paid a little attention to the prof'de with the non-normal response variable. In this paper, the focus is especially on the binary response followed by the bernoulli distribution due to its application in many fields of science and engineering. Some methods have been suggested to monitor such profiles in phase I, the modeling phase; however, no method has been proposed for monitoring them in phase II, the detecting phase. In this paper, two methods are proposed for phase II logistic prof'de monitoring. The first method is a combination of two exponentially weighted moving average (EWMA) control charts for mean and variance monitoring of the residuals defined in logistic regression models and the second method is a multivariate T2 chart to monitor model parameters. The simulation study is done to investigate the performance of the methods.

کلمات کلیدی:

Average run length; Binary response; Logistic regression model; Profile monitoring; Statistical process control

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