Demand Forecasting Using Bayesian Experiment with Non-homogenous Poisson Process Model

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Abstract—This study presents a novel mathematical model using Bayesian model for demand forecasting with non-homogenous Poisson process model. This study aims to construct a framework to minimize the overproduction and underproduction costs by using the time-dependent uncertainty of accumulative demand curve. Specific models were derived as the fundamentals of this approach. Furthermore, this study also proposed a method to evaluate demand forecasting using Bayesian experiment with non-homogenous Poisson process model.

Keywords—Demand forecasting, Poisson process, Bayesian, Mathematical model, Decision analysis

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