

***Abstract: Vacant Technology Forecasting based on Patent Analysis
Using an Ensemble Method and Bayesian Clustering***

Sunghae Jun
Department of Statistics, Cheongju University
360764 Chungbuk, Korea
shjun@cju.ac.kr

Abstract

Patent analysis is an important approach to technology forecasting because patents are an important component of developing technology. Also, we use the results of technology forecasting to build the R&D strategies efficiently. In this paper, we consider patent clustering as one of patent analyses. That is, we cluster patent documents in order to forecast the vacant area of a given technology field. This research proposes an ensemble method and Bayesian clustering for patent clustering. This research calls this new hybrid Bayesian clustering method. Furthermore, in order to determine the performance of our study, we present a case study using retrieved patent documents related to “humanoid robots and systems” from the United States Patent and Trademark Office. Therefore, in the experimental results, we will find the vacant technology area of “humanoid robots and systems” technology.