

4th International Conference on

BIG DATA ANALYSIS AND DATA MINING

September 07-08, 2017 | Paris, France

Business analytics applications in budget modeling to improve network performance

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Efficient and effective network performance monitoring is a vital part of telecommunications networks. Finding and correcting faults, however, can be very costly. In order to address network issues associated with financial losses a model in business analytics for budget planning is presented. The model that is presented is based on previous work of network fault detection, along with cost considerations and customer segmentation. This work focuses on data mining techniques to show the cost probability of the distribution of network alarms based on budget planning classification rules using predictive analytics to determine the minimum bandwidth costs that are possible with network optimization. The results of the tests performed show that reductions in optimization costs are possible; some test cases are clustered, of which the results were used to create a performance based budget model. The results also find out the clients' demographics, customers' churn and simultaneously the financial cost of network optimization in order to review an efficient budget process and improve expenditure prioritisation.

Biography

Eleni Rozaki completed an Honours degree in Economics and MSc degree in Quantitative methods and Informatics at University of Bari, Italy. Her PhD degree is in the area of "Data mining and business analytics in telecommunication networks at Cardiff University, United Kingdom". She has experience as a Data Analyst in IT and in the telecommunication industry in Ireland. She is currently working as an Associate Lecturer at Institute of Technology Tallaght, National College of Ireland and Dublin Institute of Technology. Her current research interests include "Business analytics, predictive modeling, decision support systems and data mining techniques".

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