

Analysis of the Significance of Multimedia Channels Using Sparse PCA and Regularized SVD

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Abstract : The abundance of media channels and devices has given users a variety of options to extract, discover, and explore information in the digital world. Since, often, there is a long and complicated path that a typical user may venture before taking any (significant) action (such as purchasing goods and services), it is critical to know how each node (media channel) in the path of user has contributed to the final action. In this work, the significance of each media channel is computed using statistical analysis and machine learning techniques. More specifically, "Regularized Singular Value Decomposition", and "Sparse Principal Component" has been used to compute the significance of each channel toward the final action. The results of this work are a considerable improvement compared to the present approaches.

Keywords : multimedia attribution, sparse principal component, regularization, singular value decomposition, feature significance, machine learning, linear systems, variable shrinkage

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