

Data-Driven Market Segmentation in Hospitality Using Unsupervised Machine Learning

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Abstract : Within hospitality, marketing departments use segmentation to create tailored strategies to ensure personalized marketing. This study provides a data-driven approach by segmenting guest profiles via hierarchical clustering based on an extensive set of features. The industry requires understandable outcomes that contribute to adaptability for marketing departments to make data-driven decisions and ultimately driving profit. A marketing department specified a business question that guides the unsupervised machine learning algorithm. Features of guests change over time; therefore, there is a probability that guests transition from one segment to another. The purpose of the study is to provide steps in the process from raw data to actionable insights, which serve as a guideline for how hospitality companies can adopt an algorithmic approach.

Keywords : hierarchical cluster analysis, hospitality, market segmentation

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