Data-Driven Evaluation of Passengers' Experience and Service Preferences Analysis

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Abstract. Service innovation is a new service or a renewal of an existing service that is put into practice and provides benefit to the organization that should be transdisciplinary [1]. The customer experience (CX) design is the process design teams follow to optimize customer experiences at all touchpoints before, during, and after conversion. With the rise of the Internet, online passenger reviews are of great importance to airlines because electronic word-of-mouth (eWOM) from real-world experiences significantly impacts the decisions of potential consumers and repurchasing customers. Passengers fill in their flight experience on the Skytrax website, a professional survey website covering 350 airlines. This study selects Star Alliance, OneWorld, and SkyTeam as the targets and extracts Skytrax reviews to analyze each airline affiliated with the three alliances. The data-driven transdisciplinary methods, TF-IDF, association rule mining, and sentiment analysis, are used to analyze passengers' online opinions. The result finds that alliances provide services supported via cross airlines and divisions to create benefits for stakeholders.

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