

Towards a more complete view of air transportation performance combining on-time performance and passenger sentiment

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Abstract— This paper aims at presenting a novel approach to airline sentiment analysis processing using Twitter data. By transforming trained sentiment classifiers into regressors, the daily sentiment distribution obtained can be represented as a trimodal Gaussian Mixture leading to a simple but efficient classification algorithm. These classes can be considered as daily sentiment scores. This classification applied to passenger generated tweets and airline generated tweets for five major US airlines highlights major difference in experience between passengers and airlines. This methodology also confirms the existing gap between flight performance and passenger experience and the necessity of considering and implementing passenger centric metrics.