

Empirical Studies in Multi-Channel Clustering

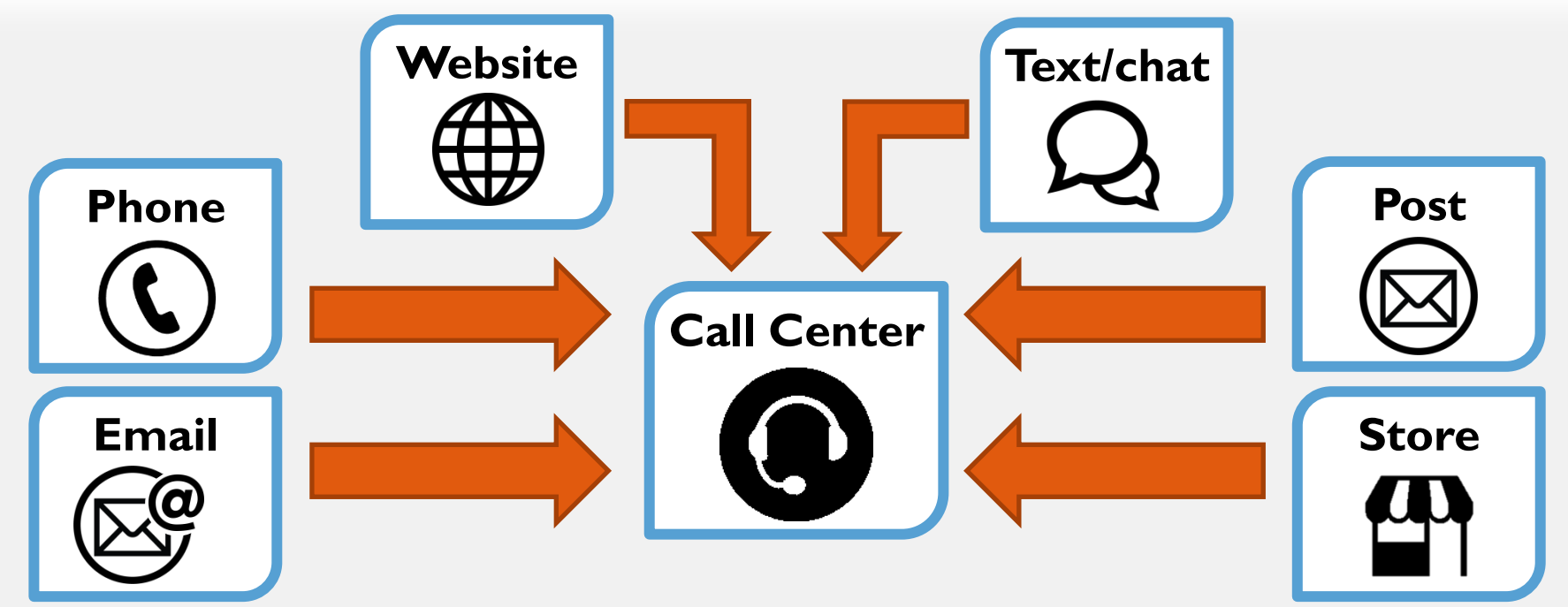
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How can large-scale enterprises extract insights from interactions coming from distinctly different interaction channels?



- Single-Channel Text Analytics (SCTA):
 - No concrete definition of insightful versus non-insightful
 - Noisy text - Automatically Transcribed Calls, SMS-speak

Current approach → use the algorithms utilized in SCTA for each interaction channel

Con: not applicable due to high variance in performance between channels, regardless of chosen algorithm

Channel adaptation

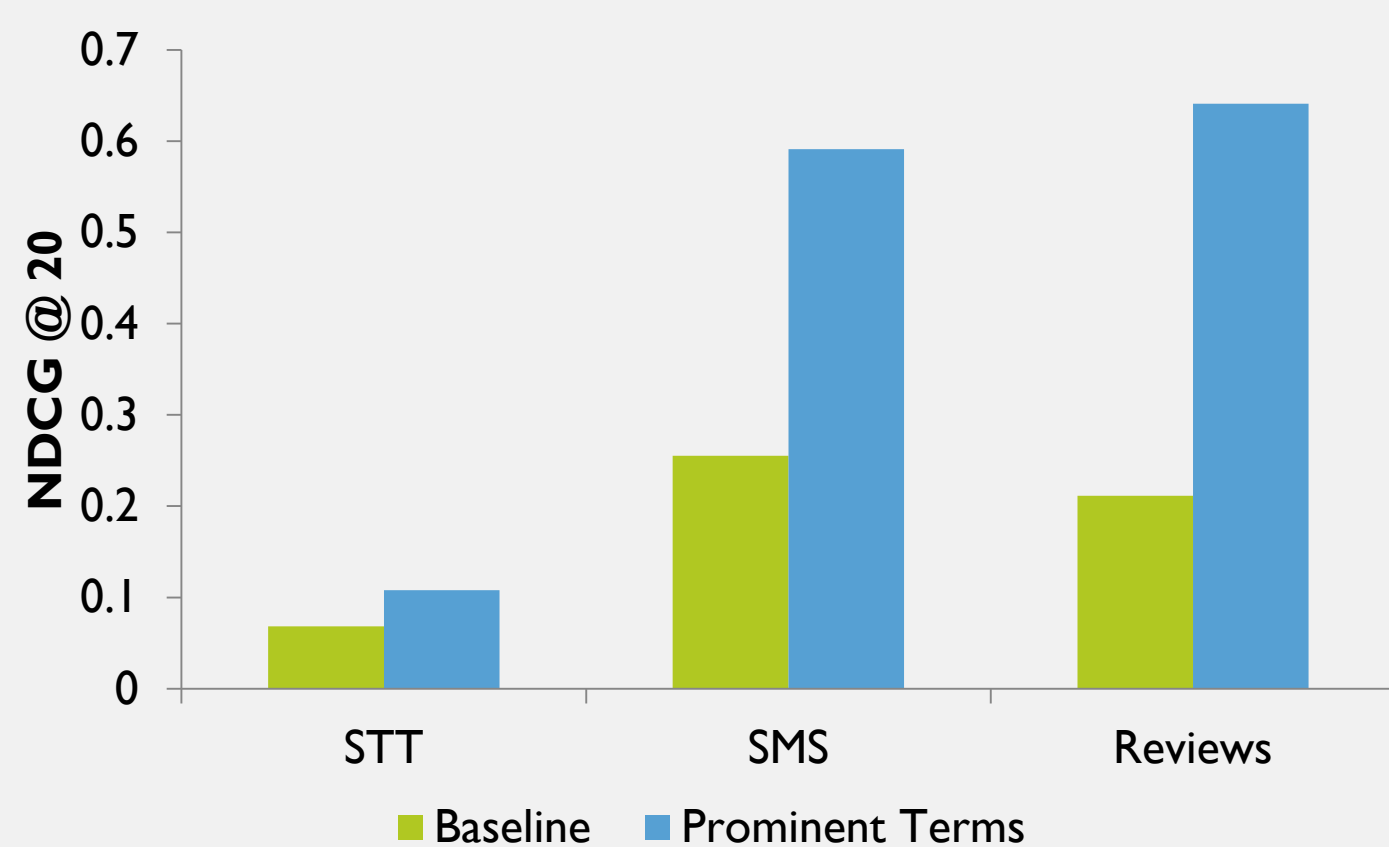
- Multi-Channel Text Analytics (MCTA):
 - High lexical variety between the channels
 - Different topics in each channel
 - Varying length of interactions

In this work we conduct thorough empirical studies using different clustering algorithms and evaluate the inter and intra-channel performance

Multi-Channel Applications & Results

NICE Prominent Terms

produce a ranked list of insights from a set of interactions, extract & rank key-phrases according to weighted parameter score



NICE Clustering

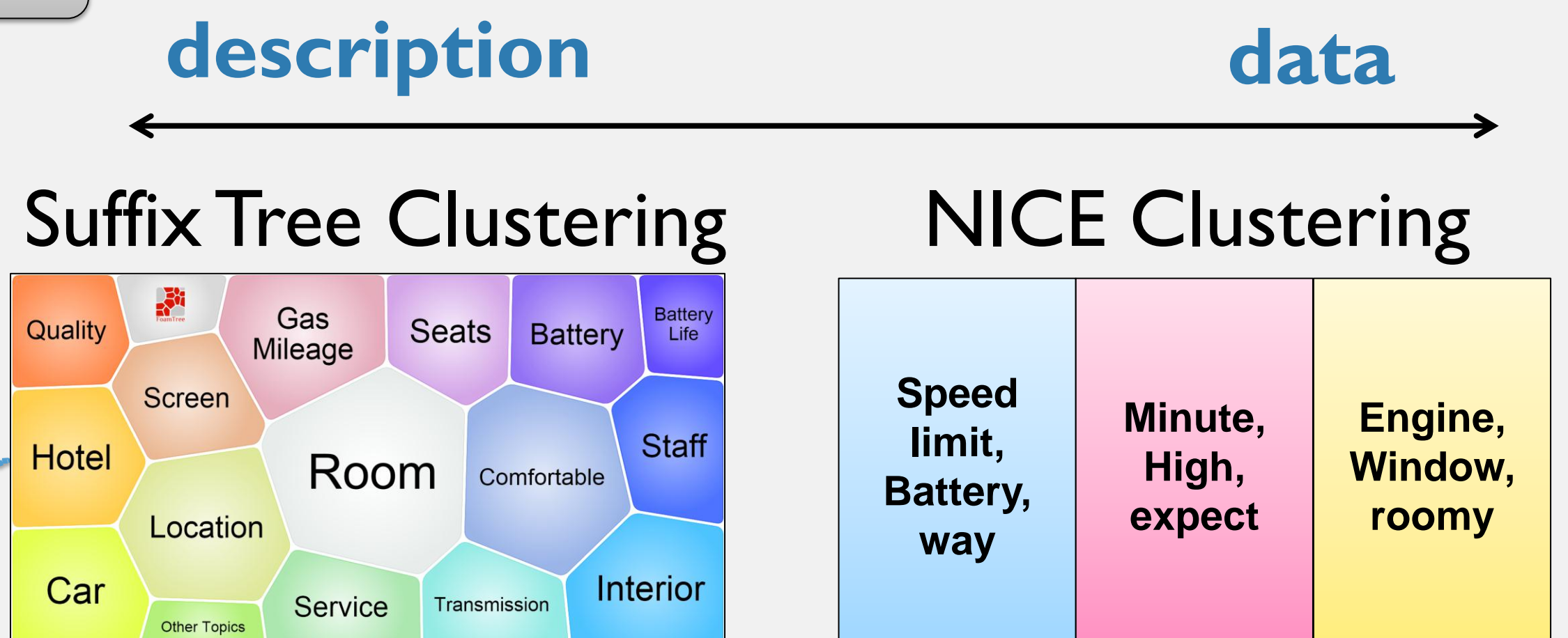
produce labelled clusters (*topics*) from a set of interactions



Description-centric vs. Data-centric

Explore intra-channel performance of clustering algorithms which aim to produce the clearest labels (*description*) vs. the clearest groupings (*data*)

Product reviews:
 • 3378 interactions
 • 3 categories (cars, hotels, gadgets)



Next Steps

Cross-Channel Analytics: How to handle interactions from different channels in a way which views them as single interaction?