ANNOUNCEMENT

BACHELOR THESIS

KEYWORDS

- Machine Learning
- Message Content
- R Statistical Software

TOPIC: MACHINE LEARNING APPROACHES IN R: APPLICATIONS TO CONSUMER INTERACTIONS

In recent years, there has been a growing interest among marketing scholars and practitioners to adopt machine learning techniques to analyze the vast amount of digital data available. Automated text analyses—and more specifically topic models—are techniques, which have emerged as versatile tools to analyze large amounts of unstructured texts for various marketing applications. Examples include profiling consumers (e.g., Blanchard et al. 2017, Trusov et al. 2016), evaluating and predicting purchase patterns (e.g., Hruschka 2016, Jacobs et al. 2016), or detecting topics (e.g., Ngyen et al. 2015) in online conversations.

The aim of this thesis is to describe different automated text analyses techniques in the context of marketing and their implementation in the statistical software R. Specifically, the student will apply a selection of these approaches in R using a sample of micro influencer campaign project blogs. Those include messages of campaign managers and micro influencer responses over time.

This thesis can be done by several students, whereas each student is asked to focus on either characterizing messages (as an example for automated sentiment and psycholinguistic text analysis, a & b) or topic discovery and evolvement (as an example for dynamic topic modelling and word embedding, c & d).

Specifically, students can choose among the following topics:

a) Characterizing campaign managers' messages and their propensity to increase micro influencer response

b) Analyzing changes in micro influencer messages over campaign runtime

c) Identifying topics in micro influencers' messages

d) Exploring topic evolution in messages during the campaign duration

For that purpose, the student will obtain a set of micro influencer campaign blog contents. The data covers texts from campaign websites comprising managers' send messages as well as micro influencers' comments replying to these messages.

LITERATURE & LINKS:

Humphreys, A., Jen-Hui Wang, R. (2018), Automated Text Analysis for Consumer Research, Journal of consumer Research, 44, 1274-1306.

Berger, J., Humphreys, A., Ludwig, S., Moe, W.W., Netzer, O., Schweidel, D.A. (2020), Uniting the Tribes: Using Text for Marketing Insight, Journal of Marekting, 84(1), 1-25.

Reisenbichler, M., Reutterer, T. (2019), Topic modeling in marketing: recent advances and research opportunities, Journal of business Economics, 89, 327-356.

Hartmann, J., Huppertz, J., Schramp, C. Heitmann, M. (2019), Comparing automated text classification methods, International Journal of Research in Marketing, 36(1), 20-38.

Silge, J., Robinson, D. (2017), Text Mining with R, 1st edition, O'Reilly Media: Boston. Available online: https://www.tidytextmining.com/

SUPERVISOR:

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APPLICATIONS:

Applications with CV and transcript of records should be sent to Ulrike Phieler (ulrike.phieler@wu.ac.at).