The role of expectations and politeness:
Automatically extracting factors for human decisions on business and customer relationship for quality assurance

The MR:comp GmbH is a service provider in the field of magnetic resonance imaging (MRI) in terms of safety and compatibility. We test in our laboratory MR safety and compatibility of implants, medical instruments and equipment in relation to possible risks, which can occur through for e.g. magnetically induced forces and torques, RF and gradient-induced warming / vibrations / elec. voltages, MR image artifacts etc., during an MR examination of a patient or user. The tests are performed according to standardized test methods.

In the field of simulation of electromagnetic fields, MRI-STaR offers research services for e.g. in order to estimate the electromagnetic fields, SAR and temperature distributions of implants during an MR examination or to simulate the MR image compatibility of medical equipment.

Job description (Master/PhD):

In the communication between consultants or businesses and sales people with customers, a common pattern is that after a first contact, a deeper exchange about a product or a service starts, which is important for industry quality level. This communication finally results in buying a service and establishing a customer desired high-quality relationship. Companies are interested to understand, from the set of all communication threads what the factors are relevant and which is the parameter content of the communication. Such factors can be divided into different categories.

In this thesis for customer relationship enhancement, which is a collaboration between the MRI-STaR Research Institute (www.MRI.STaR.com) and the Universität Stuttgart, Institute for Natural Language Processing (www.ims.uni-stuttgart.de), we will explore such different aspects as well as politeness aspects. These serve as features in a classification setting. Optionally, embedding such factors in latent spaces in the spirit of deep learning classification might be an interesting strategy.

Preliminaries:
At least two lectures from this list:
- deep learning
- information retrieval and text mining
- probabilistic graphical models for natural language processing
- natural language understanding.

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