



Abschlussvortrag Masterarbeit Michaela Löffler

„Effizienzsteigerung durch automatisierte Fehlerticket-Klassifikation: Ein Vergleich von klassischen vs. modernen NLP- und Deep Learning-Ansätzen“

Many companies, especially small and medium-sized enterprises (SMEs), use ticket systems to manage customer inquiries. In a specific use case, however, tickets are distributed manually, which leads to delays and inefficient processes. This often results in longer processing times and the risk of tickets being incorrectly assigned, which can have a negative impact on customer satisfaction. To solve these challenges, this thesis investigates how machine learning methods can be used to automate ticket distribution. Real ticket data from a real SME use case is used to develop and evaluate the models in a practical way.

By using Natural Language Processing (NLP) in combination with a Long Short-Term Memory (LSTM) model, an attempt is made to analyze the text data of the tickets and automatically assign them to the correct departments or specialists. The LSTM networks make it possible to recognize even complex relationships in the texts and to use the context information for a more precise distribution. In addition to LSTM, various embedding methods, including self-created embeddings, pre-trained GloVe embeddings and the statistical Bag-of-Words (BoW), are examined and compared. The focus is on data preparation, feature extraction and training of the models in order to increase the efficiency and accuracy of automated ticket distribution and to optimize internal processes. The aim of this work is to develop and evaluate a model that ensures fast, reliable and efficient ticket distribution.

Betreuer der Arbeit: Prof. Dr. Andreas Rausch, Dr. Stefan Wittek

Datum: Mittwoch, 25. September 2024, 8:30 Uhr

Ort: Online-Meeting über BBB

Link: <https://webconf.tu-clausthal.de/rooms/sim-uc9-rvy/join>