Research Topics

Topic 1: Hierarchical Attention Networks for Customer Support Systems

- Datasets:
  a) https://www.kaggle.com/datasets/cynthiarempel/amazon-us-customer-reviews-dataset
  b) https://www.kaggle.com/datasets/thoughtvector/customer-support-on-twitter
- Research papers
  a) Enhancing Intent Detection in Customer Service with Social Media Data (https://dl.acm.org/doi/10.1145/3442442.3451377)
  b) Research on Intelligent Customer Service System for Power Industry Based on Semantic Understanding (https://ieeexplore.ieee.org/document/10393830)
  c) Intent recognition model based on sequential information and sentence features (https://www.sciencedirect.com/science/article/pii/S0925231223011773?via%3Dihub)

Topic 2: Using NLP for technical documentation in software development

- Dataset: https://www.kaggle.com/datasets/thedevastator/python-code-instruction-dataset
- Research papers:
  a) Research of Applicability of Natural Language Processing Models to the Task of Analyzing Technical Tasks and Specifications for Software Development(https://ieeexplore.ieee.org/document/10554107)
  b) Integrating Natural Language Processing and Software Engineering (https://www.researchgate.net/publication/292299148_Integrating_Natural_Language_Processing_and_Software_Engineering)
  c) A Systematic Literature Review on Using Natural Language Processing in Software Requirements Engineering (https://www.mdpi.com/2079-9292/13/11/2055)

Topic 3. Investigating the Evolution of Traditional NLP Tasks in the Era of LLMs: A Comparative Analysis of Task-Specific vs. LLM-Based Approaches

- Dataset: https://data.mendeley.com/datasets/zmycy7t9h9/2
- Research Papers:
  a) Recent Advances in Natural Language Processing via Large Pre-trained Language Models: A Survey (https://dl.acm.org/doi/10.1145/3605943)
  b) Natural language processing in the era of large language models (https://pmc.ncbi.nlm.nih.gov/articles/PMC10820986/)

c) Exploring the Landscape of Natural Language Processing Research (https://www.researchgate.net/publication/377259742_Exploring_the_Landscape_of_Natural_Language_Processing_Research)