

Improving Machine Learning Translation of Hausa Using Named Entity Recognition

Authors : Aishatu Ibrahim Birma, Aminu Tukur, Abdulkarim Abbass Gora

Abstract : Machine translation plays a vital role in the Field of Natural Language Processing (NLP), breaking down language barriers and enabling communication across diverse communities. In the context of Hausa, a widely spoken language in West Africa, mainly in Nigeria, effective translation systems are essential for enabling seamless communication and promoting cultural exchange. However, due to the unique linguistic characteristics of Hausa, accurate translation remains a challenging task. The research proposes an approach to improving the machine learning translation of Hausa by integrating Named Entity Recognition (NER) techniques. Named entities, such as person names, locations, organizations, and dates, are critical components of a language's structure and meaning. Incorporating NER into the translation process can enhance the quality and accuracy of translations by preserving the integrity of named entities and also maintaining consistency in translating entities (e.g., proper names), and addressing the cultural references specific to Hausa. The NER will be incorporated into Neural Machine Translation (NMT) for the Hausa to English Translation.

Keywords : machine translation, natural language processing (NLP), named entity recognition (NER), neural machine translation (NMT)

Conference Title : ICICS 2024 : International Conference on Information and Computer Sciences

Conference Location : Lagos, Nigeria

Conference Dates : August 08-09, 2024