NILC-WISE: An Easy-to-use Web Interface for Summary Evaluation with the ROUGE Metric

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Abstract. NILC-WISE is an easy-to-use web application for summary evaluation that provides resources and tools to evaluate summaries written in Portuguese, using the ROUGE metric. Its purpose is to be a default experiment environment, contributing to the summarization area.

1 Introduction

Automatic Summarization (AS) aims to produce a condensed version (or a summary) with the most important content from one or more related texts [7]. Usually, summaries produced by automatic systems are evaluated with the ROUGE framework [6], which analyses the n-gram overlapping among automatic and reference/model summaries.

The ROUGE framework is available for download in its official webpage[1]. However, this system is focused on English language and most of its resources and tools for text normalization are specific for this language. Given the investigations in summarization for the Portuguese language, as [5, 10, 11, 1, 3, 8, 2, 9], we consider that it is very important to have a standard and easy-to-use environment of ROUGE for evaluation of summaries in Portuguese.

It is important to say that it is possible to use the official ROUGE package for Portuguese if the user avoids some ROUGE parameters or if some internal resources in the system are changed. However, even if the user correctly sets the environment, the use of different resources and/or tools may produce different evaluation results (e.g., the use of distinct text normalization processes, as the algorithm of stemming and removal of stopwords). Such issues may harm the validity of comparative evaluations and be a problem for advancing the knowledge frontier in the area.

In this paper, we introduce NILC-WISE (Web Interface for Summary Evaluation developed at NILC), which is an easy-to-use web interface for applying ROUGE for summary evaluation for Portuguese language, aiming at dealing with the above issues and allowing for more systematic and uniform evaluations.

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[1] http://www.berouge.com

2   The NILC-WISE interface

When accessing for the first time the NILC-WISE interface (see Fig. 1), the user must create a personal account[2] (providing e-mail, password and institution information). After performing login, the user may access any previous experiments he has eventually carried out and the available datasets on NILC-WISE, as well as to evaluate summaries based on a set of reference summaries. At the moment, as reference summaries, we have some different settings of the CST-News corpus [4]. However, in the future, we want to add other Portuguese and English datasets in the tool.
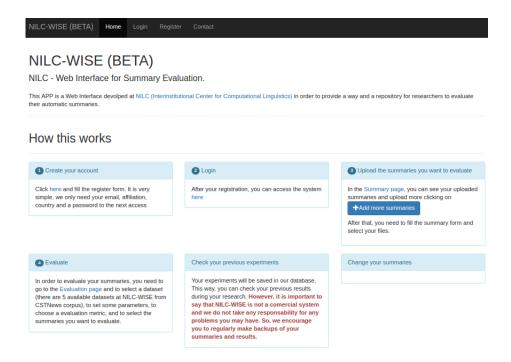

Fig. 1. NILC-WISE interface

Before performing the evaluation of his automatic summaries, the user must create a summary directory in NILC-WISE and indicate a title for it, the filename pattern of the summary files[3] and the summary language (e.g., Portuguese or English). In this summary directory, the user may then upload the summary files to NILC-WISE.

During the evaluation process, the user must pick one available dataset on NILC-WISE, to select one of his summary directories and to configure the pa-

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[2] We use this option in order to contact the researchers if it is necessary.
[3] This information is required for ROUGE.

rameters for text normalization and for ROUGE. For normalization, NILC-WISE uses a list of stopwords for Portuguese developed at NILC[4] and a stemming algorithm provided by the NLTK[5] package for Portuguese.

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[4] http://www.nilc.icmc.usp.br/
[5] http://www.nltk.org/