**Abstract** (The description of the dataset (brief))

* *Explain what datset contains and which is the goal*

AcCompl-It is task’s purpose is to develop and evaluate methods to classify the italian sentences with a scale from 1 to 7 regardles to the acceptability and complexity based on the native speaker judgement. The Acceptability is the judgement based on the correcteness of the sentences. The native speaker take into account formal and psycho-linguistic theories as well as for generation, summarization and machine translation tasks. On the other hand Complexity is evaluated from the speaker based on the difficulty to understand and process the sentence. It compes neurolinguistic and psycholinguistic theories for rating the accessibility of a text.

The dataset contains 2 files, training and test for each of the subtasks.

**Dataset input** (The format of the given dataset, give to us a sample of the input format.)

* *Give 2-3 lines of the dataset and explain the columns.*

The dataset provided is in .tsv format and it has the sentence with some features that are extracted from native speakers evaluation like: number of human scores associated with the sentence, mean value, standard deviation, standard error and the task.

A screenshot of a computer

Description automatically generated

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| id | N | mean | sd | se | sentence | task |
| AC-OC-02-R0001 | 13 | 3.384615 | 1.26085 | 0.349697 | Chi dici che l'infermiera voglia chiamare e il dottore visitare? | complexity |
| AC-OC-02-R0002 | 15 | 2.866667 | 1.302013 | 0.336178 | Sapevo che l'infermiera voleva registrare e Marco visitarlo . | complexity |

A screenshot of a computer

Description automatically generated

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| id | N | mean | sd | se | sentence | task |
| AC-01-R0001 | 14 | 5.285714 | 1.325987 | 0.354385 | Quando gli invitati erano in ritardo lui avvertiva sempre il ristorante. | acceptability |
| AC-01-R0002 | 10 | 6.7 | 0.674949 | 0.213437 | I ciclisti hanno pedalato. | acceptability |
| AC-01-R0003 | 10 | 6.8 | 0.632456 | 0.2 | I malati hanno starnutito. | acceptability |

**Dataset Creation** (Methodology used to reframe the dataset)

* *Expalin the table and add reference to the table in the next page.*
* *How is moved from numbers to full numbers and then the sostituition with Italian words.*

To transform the dataset using the evaluation of the native speaker I was based on the mean result of eveluation for the complexity and for the acceptability. I took into account this value because it express better the overall level for each task. As asked from the requirements I transformed the 1-7 likert scale from numbers to Italian words, I used Pessima, Scarsa, Sufficente, Buona, Ottima, Eccellente, Eccezionale for the acceptability and Molto Basa, Basa, Moderata, Media, Alta, Molto Alta, Massima for the complexity. Then I grouped each evaluation to end up with only 4 choices as the final possible result. The convertion of intervals used to evaluate each result is given in the tables below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Number** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Mean** | 1-1.5 | 1.5-2.5 | 2.5-3.5 | 3.5-4.5 | 4.5-5.5 | 5.5-6.5 | 6.5-7 |
| **Mean** | 1-2.5 | | 2.5-4.5 | | 4.5-6.5 | | 6.5-7 |
| **Verbalization** | Pessima | Scarsa | Sufficente | Buona | Molto Buona | Ottima | Eccellente |
| **Choices** | Scarsa | | Buona | | Ottima | | Eccellente |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Number** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **Mean** | 1-1.5 | 1.5-2.5 | 2.5-3.5 | 3.5-4.5 | 4.5-5.5 | 5.5-6.5 | 6.5-7 |
| **Mean** | 1-2.5 | | 2.5-4.5 | | 4.5-6.5 | | 6.5-7 |
| **Verbalization** | Molto Basa | Basa | Moderata | Media | Alta | Molto Alta | Massima |
| **Choices** | Basa | | Moderata | | Alta | | Massima |

**Promts**

* *Give 4 promts for each datset*

{"id": "1", "text": "Quando gli invitati erano in ritardo lui avvertiva sempre il ristorante.", "choices": ["Scarsa", "Sufficiente", "Buona", "Eccellente"], "label": 3}

**Acceptability**

To chose the most appropriate promts for the ACCOMPLIT task I tried to be as clear as possible while writing the promt. I was very specific when asking for the response and referred to the information given in the dataset using Jinja templates. I started with simple promts, where being very concise in structuring the promt and I also added more complex promts going further into details of the specific task.

Valuta l'accettabilità della seguente frase: '{{text}}'. Scegli tra le opzioni {{choices}}.

Determina l'accettabilità della frase fornita '{{text}}' e seleziona la migliore opzione tra le scelte '{{choices}}'.

Esprimi il tuo giudizio sull'accettabilità della frase '{{text}}'. Indica il livello di accettabilità scegliendo tra Scarsa, Buona, Ottima e Eccellente.

Confronta la frase fornita '{{text}}' con le scelte indicate '{{choices]}' e seleziona l'opzione che rappresenta meglio la sua accettabilità.

Considerando il contesto, quale delle opzioni dalla seguente lista: Scarsa, Buona, Ottima o Eccellente, valuta la correttezza della frase '{{text}}'.

{"id": "1", "text": "Chi dici che l'infermiera voglia chiamare e il dottore visitare?", "choices": ["Molto Bassa", "Moderata", "Alta", "Massima"], "label": 2}

**Complexity**

Valuta il livello di complessità della frase '{{ text }}'. Scegli tra le opzioni '{{choices}}'.

Considerando la complessità linguistica, la difficoltà della seguente frase {{text}} è Molto Bassa, Moderata, Alta o Massima?

Confronta la complessità della frase fornita '{{text}}' con le opzioni indicate '{{choices}}' e seleziona il livello più appropriato.

Esprimi un giudizio sulla complessità della frase {{text}}, considerando la sua struttura e il suo contenuto. Indica il livello di difficoltà tra le opzioni '{{choices}}'.

Valuta la complessità sintattica e semantica della frase fornita '{{text}}' e assegna un grado di difficoltà tra 'Molto Bassa', 'Moderata', 'Alta', 'Massima'.

**Instructions** (instructions to run code and other information you think it will be useful for us)

* *The dataset can be created by running the script.py.*

After downloading the datasets and adding them to the same directory as script.py file. Open the terminal and run the following code: python script.py

This will create the dataset in the .jsonl format as requested.

*Next page*

**References**

**\pdfoutput=1**

**\documentclass[11pt]{article}**

**\usepackage{acl}**

**\usepackage{times}**

**\usepackage{latexsym}**

**\usepackage[T1]{fontenc}**

**\usepackage[utf8]{inputenc}**

**\usepackage{microtype}**

**\usepackage{inconsolata}**

**\usepackage{graphicx}**

**\documentclass{article}**

**\usepackage{tabularx}**

**\usepackage{booktabs} % for better horizontal rules**

**\title{Accomplit}**

**\author{Gerald Cakoni \\**

**\texttt{cakoni.1985088@studenti.uniroma1.it}}**

**\begin{document}**

**\maketitle**

**\begin{abstract}**

**AcCompl-It is task’s purpose is to develop and evaluate methods to classify the italian sentences with a scale from 1 to 7 regardles to the acceptability and complexity based on the native speaker judgement. The Acceptability is the judgement based on the correcteness of the sentences. On the other hand Complexity is the difficulty to understand and process the sentence. It use neurolinguistic and psycholinguistic theories.**

**\end{abstract}**

**\section{Dataset Input}**

**The dataset provided is in TSV format and it has the sentence with some features that are extracted from native speakers evaluation like: number of human scores associated with the sentence, mean value, standard deviation, standard error and the task.**

**\section{Dataset Transformation}**

**To transform the dataset I was based on the mean result of eveluation because this value express better the overall level for each task. As asked from the requirements I transformed the 1-7 likert scale from numbers to Italian word. Then I grouped each evaluation to end up with only 4 choices as the final possible result. The convertion of intervals**

**and numbers to words used to evaluate each result is given in the tables below.**

**\section{Prompts}**

**\{"id": "1", "text": "Quando gli invitati erano in ritardo lui avvertiva sempre il ristorante.", "choices": ["Scarsa", "Sufficiente", "Buona", "Eccellente"], "label": 3\}**

**%\subsection{Acceptability}**

**\textbf{Acceptability}**

**To chose the most appropriate promts for the ACCOMPLIT task I tried to be as clear as possible while writing the promt. I was very specific when asking for the response and referred to the information given in the dataset using Jinja template. I started with simple promts and later going further into more complex ones.**

**\begin{itemize}**

**\item[$\circ$] Valuta l'accettabilità della seguente frase: \{\{text\}\}. Scegli tra le opzioni \{\{choices\}\}.**

**\item[$\circ$] Determina l'accettabilità della frase fornita \{\{text\}\} e seleziona la migliore opzione tra le scelte \{\{choices\}\}.**

**%\item[$\circ$] Esprimi il tuo giudizio sull'accettabilità della frase \{\{text\}\}. Indica il livello di accettabilità scegliendo tra Scarsa, Buona, Ottima e Eccellente.**

**\item[$\circ$] Confronta la frase fornita \{\{text\}\} con le scelte indicate \{\{choices\}\} e seleziona l'opzione che rappresenta meglio la sua accettabilità.**

**\item[$\circ$] Considerando il contesto, quale delle opzioni dalla seguente lista: Scarsa, Buona, Ottima o Eccellente, valuta la correttezza della frase \{\{text\}\}.**

**\end{itemize}**

**%\subsection{Complexity}**

**\textbf{Complexity}**

**\begin{itemize}**

**\item[$\circ$] Valuta il livello di complessità della frase \{\{text\}\}. Scegli tra le opzioni \{\{choices\}\}.**

**\item[$\circ$] Considerando la complessità linguistica, la difficoltà della seguente frase \{\{text\}\} è Molto Bassa, Moderata, Alta o Massima?**

**\item[$\circ$] Confronta la complessità della frase fornita '{{text}}' con le opzioni indicate \{\{choices\}\} e seleziona il livello più appropriato.**

**%\item[$\circ$] Esprimi un giudizio sulla complessità della frase \{\{text\}\}, considerando la sua struttura e il suo contenuto. Indica il livello di difficoltà tra le opzioni \{\{choices\}\}.**

**\item[$\circ$] Valuta la complessità sintattica e semantica della frase fornita \{\{text\}\} e assegna un grado di difficoltà tra 'Molto Bassa', 'Moderata', 'Alta', 'Massima'.**

**\end{itemize}**

**\section{Instructions}**

**Download the datasets and add them to the same directory as script.py file.**

**Open the terminal and run the following code: python script.py.**

**This will create the dataset in the JSONL format as requested.**

**\section{Tables}**

**\begin{table}[htbp]**

**\centering**

**\caption{Acceptability and Complexity input data}**

**\begin{tabularx}{\textwidth}{|c|c|c|c|c|X|c|} % using tabularx instead of tabular**

**\hline**

**id & N & mean & sd & se & sentence & task \\**

**\hline**

**AC-01-R0001 & 14 & 5.285714 & 1.325987 & 0.354385 & Quando gli invitati erano in ritardo lui avvertiva sempre il ristorante. & acceptability\\**

**\hline**

**AC-01-R0002 & 10 & 6.7 & 0.674949 & 0.213437 & I ciclisti hanno pedalato. & acceptability\\**

**\hline**

**AC-01-R0003 & 10 & 6.8 & 0.632456 & 0.2 & I malati hanno starnutito. & acceptability\\**

**\hline**

**\hline**

**AC-OC-02-R0001 & 13 & 3.384615 & 1.26085 & 0.349697 & Chi dici che l'infermiera voglia chiamare e il dottore visitare? & complexity\\**

**\hline**

**AC-OC-02-R0002 & 15 & 2.866667 & 1.302013 & 0.336178 & Sapevo che l'infermiera voleva registrare e Marco visitarlo . & complexity\\**

**\hline**

**\end{tabularx}**

**\label{tab:my\_table}**

**\end{table}**

**\begin{table}[htbp]**

**\centering**

**\caption{Acceptability converting numbers to words and grouping in 4 choices}**

**\begin{tabularx}{\textwidth}{|c|\*{7}{X|}} % using tabularx instead of tabular**

**\hline**

**Number & 1 & 2 & 3 & 4 & 5 & 6 & 7\\**

**\hline**

**Mean & 1-1.5 & 1.5-2.5 & 2.5-3.5 & 3.5-4.5 & 4.5-5.5 & 5.5-6.5 & 6.5-7\\**

**\hline**

**Verbalization & Pessima & Scarsa & Sufficente & Buona & Molto Buona & Ottima & Eccellente\\**

**\hline**

**\multicolumn{1}{|c|}{Group Mean} & \multicolumn{2}{c|}{1-2.5} & \multicolumn{2}{c|}{2.5-4.5} & \multicolumn{2}{c|}{4.5-6.5} & \multicolumn{1}{c|}{5-7}\\**

**\hline**

**\multicolumn{1}{|c|}{Choices} & \multicolumn{2}{c|}{Scarsa} & \multicolumn{2}{c|}{Buona} & \multicolumn{2}{c|}{Ottima} & \multicolumn{1}{c|}{Eccellente}\\**

**\hline**

**\end{tabularx}**

**\label{tab:my\_table}**

**\end{table}**

**\begin{table}[htbp]**

**\centering**

**\caption{Complexity converting numbers to words and grouping in 4 choices}**

**\begin{tabularx}{\textwidth}{|c|\*{7}{X|}} % using tabularx instead of tabular**

**\hline**

**Number & 1 & 2 & 3 & 4 & 5 & 6 & 7\\**

**\hline**

**Mean & 1-1.5 & 1.5-2.5 & 2.5-3.5 & 3.5-4.5 & 4.5-5.5 & 5.5-6.5 & 6.5-7\\**

**\hline**

**Verbalization & Molto Bassa & Bassa & Moderata & Media & Alta & Molto Alta & Massima\\**

**\hline**

**\multicolumn{1}{|c|}{Group Mean} & \multicolumn{2}{c|}{1-2.5} & \multicolumn{2}{c|}{2.5-4.5} & \multicolumn{2}{c|}{4.5-6.5} & \multicolumn{1}{c|}{5-7}\\**

**\hline**

**\multicolumn{1}{|c|}{Choices} & \multicolumn{2}{c|}{Molto Bassa} & \multicolumn{2}{c|}{Moderata} & \multicolumn{2}{c|}{Alta} & \multicolumn{1}{c|}{Massima}\\**

**\hline**

**\end{tabularx}**

**\label{tab:my\_table}**

**\end{table}**

**\section{References}**

**\end{document}**