Audience Rating Annotation Guidelines

Annotation Project (Part 2)

INFO 159 - Natural Language Processing

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1.   Overview

Supplying books with maturity guidelines can be helpful for individual readers, researchers, and online platforms that rely on ML algorithms to make recommendations based on rating filters. These ML algorithms are mostly based on supervised learning that require a large amount of annotated data. This Guidelines document is developed and validated by human annotators. The purpose of this document is to provide clear guidelines for anybody wanting to reproduce our annotation process.

2.   Background and Data Copus

These guidelines were developed to assign an *Audience Rating* to a book based on its *Maturity Level* and *Reading Difficulty Level*. During document collection and feedback from NLP experts, it was evident that reading through and annotating 500 books wasn't feasible, so we instead collected public domain book summaries from Librivox to glean the Maturity Level. Also, to assess reading difficulty level, the first, last, and a random excerpt/paragraph were collected from each document. These aspects were used to annotate and get an adjudicated rating for each document with 4 different labels. This turned out to be a more prolific corpus and manual annotation project. This was mainly electronic curation from public websites -
- *Project Gutenberg*
- *Librivox*

3.   Annotation Methodology

The annotation goal is to label a book's *'Audience Rating'* so that each book has an audience rating labeled with either 'Child', 'Adolescent', 'Young Adult', or 'Adult' based on the book content and reading levels.

We developed scoring systems for both Maturity Level and Reading Difficulty. Both categories consist of three different aspects that make up their respective scores. Based on the combined scores, we then labeled the text with an age group.

Maturity Level Scoring System:
    Content Themes:
- 1 Point: Universal themes suitable for all ages
- 2 Points: Themes that require some life experience to relate, such as friendship challenges or adolescent issues
- 3 Points: Mature or adult themes, such as complex moral dilemmas, explicit content, or intense conflict

    Emotional Depth:
- 1 Point: Basic emotions and simple relationships, easy for young children to understand

- 2 Points: More complex emotions and relationships, such as teenage romance or family dynamics
- 3 Points: Deep emotional complexity with nuanced portrayals of relationships and experiences, suitable for adults

Conflict and Resolution:
- 1 Point: Straightforward conflicts with clear resolutions, like good vs. evil or simple problem-solving
- 2 Points: Conflicts that present moral or ethical choices, requiring some level of critical thinking or experience
- 3 Points: Complex conflicts involving moral ambiguities, ethical dilemmas, or unresolved endings, typical of adult-level content

Reading Difficulty Scoring System:

Sentence Structure:
- 1 Point: Short sentences - brief and straightforward, typically under 10 words, conveying simple ideas directly
- 2 Points: Long sentences - incorporating additional information or descriptions, maybe connecting multiple ideas.
- 3 Points: Complex sentences with multiple clauses or passive construction

Vocabulary:
- 1 Point: Common words are frequently used and universally understood, making up the basic building blocks of everyday communication.
- 2 Points: Contains words not typically encountered in everyday conversation and may challenge the average reader
- 3 Points: Repeated use of advanced words, requiring a highly developed vocabulary. May use technical or specialized terms that are specific to certain fields or areas of expertise

Text Complexity:
- 1 Point: Clear, uncomplicated ideas that are easily grasped and do not require specialized knowledge or life experience to understand.
- 2 Points: A higher level of detail or abstraction, demanding some degree of critical thinking or background knowledge for a fuller understanding
- 3 Points: encompass in-depth, specialized, or theoretical content that requires extensive background knowledge, expertise, or analytical skills to interpret and understand.

After reading the text and assigning a score for each category, you should be left with a total score in the range of 6 to 18. Based on that score, assign an *Audience Rating* based on the following guidelines:
- Scores (6-9] : Child

- Scores (9-12] : Adolescent
- Scores (12-15] : Young Adult
- Scores (15-18] : Adult