Fixing grammar errors semi-automatically

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LanguageTool WikiCheck Overview

- A system that looks for style and grammar problems:
  - in Wikipedia articles
  - in changes to Wikipedia articles
- Used to correct > 2,000 errors in de.wikipedia.org in the last few months
  - works with other languages, too

Roadmap

- How to find style and grammar errors automatically
- How LanguageTool WikiCheck works internally
- How LanguageTool WikiCheck can help you and how you can help WikiCheck
- Q+A

About us

- Marcin Miłkowski
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  - Software developer from Potsdam, Germany
  - Also: openthesaurus.de

How to Find Style and Grammar Errors

- Go to http://tools.wmflabs.org/languagetool
  - Demo: Check any Wikipedia page
  - Demo: Check the recent changes

Wikipedia Integration

- https://meta.wikimedia.org/wiki/User:Hedonil/XTools

Examples of False Alarms

- Word repetition:
  - “his great great grand son”
- Use simply: a Thousand:
  - “location=Thousand Oaks, Calif.”

- => Always check the suggestions of LanguageTool

Supported Languages

- Asturian, Belarusian, Breton, Catalan, Chinese, Danish, Dutch, English, Esperanto, French, Galician, German, Greek, Icelandic, Italian, Japanese, Khmer, Lithuanian, Malayalam, Polish, Portuguese, Romanian, Russian, Slovak, Slovenian, Spanish, Swedish, Tagalog, Tamil (next version), Ukrainian
  - Supported to a very different degree
  - Not all languages have the 'Recent Changes' check activated. Talk to me to activate it.

How it Works Internally

- Based on LanguageTool
  https://languagetool.org
- Open Source (LGPL)
- Written in Java
- Doesn't know grammar, but knows (typical) errors
  - The errors are found in the text by matching them to patterns

Error Pattern: Simple Example

- "Sorry for my bed English."
  - Spell checking won't help here
- Pattern for that error:

```
<pattern>
 <token>bed</token>
 <token>English</token>
</pattern>
```

Error Pattern Editor

- Demo of the Rule Editor: 'Sorry for my bed English' at

  http://community.languagetool.org/ruleEditor2/

Error Patterns: Some Numbers

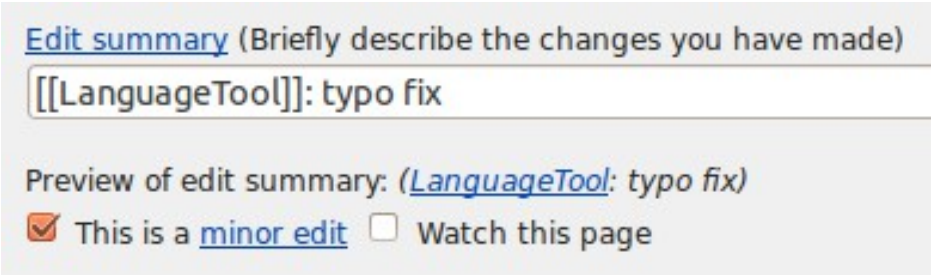
- How many error patterns do we have?
  - About 1,000 for English (help needed!)
  - About 1,800 for German
- ...but only:
  - 97 for Spanish
  - 43 for Japanese
  - 26 for Swedish
  - For the full list, see https://languagetool.org/languages/

Error Patterns for Wikipedia

- For German, we have some Wikipedia-specific patterns:
  - “in letzter Zeit” (recently)
  - “Es wurde bewiesen, dass” (Studies show)
- See potential patterns for English at https://en.wikipedia.org/wiki/Weasel_word

Known Limitations

- Won't find all errors
- Sometimes complains about text which is correct
  - Sometimes get confused by Mediawiki syntax (solution: Parsoid? Help welcome!)
- "Watch this page" is always off by default



How WikiCheck can help you

- ...as a software developer
  - Use our public HTTP API at http://wiki.languagetool.org/public-http-api
  - Maybe help us integrate LanguageTool with the Visual Editor?
    http://wiki.languagetool.org/mediawiki-visual-editor

How WikiCheck can help you

- ...as a Wikipedia editor
  - Subscribe to the feed at http://tools.wmflabs.org/languagetool/feedMatches to get fresh errors from 'recent changes'
  - Send us feedback

Summary

- LanguageTool WikiCheck can already find many errors
- It finds errors by searching for error patterns
- Your help in writing error patterns, for any language, is very welcome

Thank you

- Contact: daniel.naber@languagetool.org
- http://tools.wmflabs.org/languagetool
- http://languagetool.org