

GECKO

Software project, work update 1

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Grammatical error

Modern approaches to grammatical error correction

Grammarly

Action plan

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What is a grammatical error?

Grammatical error is an umbrella term used in prescriptive grammar to describe an instance of faulty, unconventional, or controversial usage of a given language.

Native vs non native

Errors made by learners are different from those made by native speakers. [2] and [3] have studied errors made by college students in the United States and ESL learners. Results showed that half of the ten most frequent error types made by native speakers were 'negligible' in ESL writings [6].

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Functionalities continued

Test

Firemen are the heroes of the nation.

• SENSITIVITY

Firemen → Firefighters

In this context, some readers may find **Firemen** outdated or non-inclusive. Consider replacing it with a more neutral term.

[? Learn more](#)



Figure: Inclusive writing.

Functionalities continued

possible from a wide range of speakers. The technique used to achieve this lexicon is called Grapheme-to-Phoneme (G2P) conversion. It is the task of predicting the pronunciation of a word given its graphemic or written form [34]. It can be done by hand or using different algorithms.

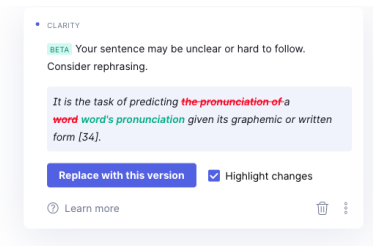


Figure: Clarity.

Possible improvements continued

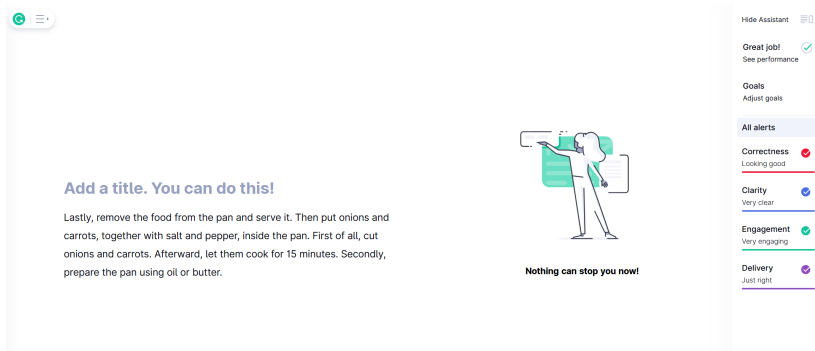


Figure: Discourse fallacy.

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Action plan

- Objective

- deploy an end-to-end GEC system on a web-application

■ Technologies

- NLP: Python (PyTorch, spaCy, OpenNMT)
- Web-app: HTML, CSS, SQL, php, JS

- Data

- use existing parallel corpora (NUCLE, CLC)
- generate synthetic data?

- Evaluation

- no single best evaluation metric, usefulness of a metric depends on the application
- BEA Shared Task - 2019, restricted/low resource track

Milestones



Figure: Milestones

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