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Deep Learning-powered grammar correction tool

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- Grammar correction is the task of identifying and correcting grammatical errors in text.
- Issue - 'How to utilize a trained T5 model instead of the default one in LanguageTool.

Objective

The goal is to develop an API to obtain data through LanguageTool browser plugin and generate rectified version of incorrect text through trained model.

- Analyze the technology that can be used to create a stable and secure API.
- Develop API that obtain the incorrect data from LanguageTool browser plugin and sends back rectified version as suggestion.

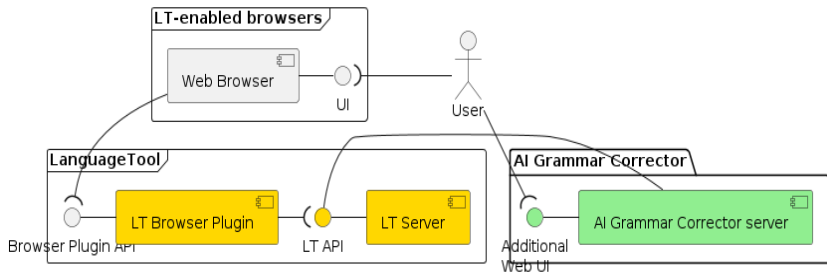
- FastAPI is a high-performing web framework has been using for building API.
- FastAPI combines the simplicity of Python and performance from asynchronous programming that make the best choice for applications that require high performance and high speed and in the meantime efficient.

¹FastAPI - <https://fastAPI.tiangolo.com/>

- LanguageTool is a multilingual spelling and grammar checking tool that assists authors in writing text by detecting and correcting typos and grammatical errors in various writing formats.
- It's ideal for both native and non-native English speakers. Plus, it works with over 25 other languages.

²Language Tool - <https://languagetool.org/>

Integration process architecture



API integration process

In order to reduce conflicts, the API routes are split into two sections: the main and sub API, each functionality serving a distinct purpose.

- Main API - Obtain data from LanguageTool browser plugin.
- Sub API - Extends the functionality of the main API by providing additional endpoints for users.

- Analyzed the technology that can be used to create stable and secure API.
- Developed API that obtain the incorrect data from LanguageTool browser plugin and sends back rectified version as suggestion.
- Source code available:
<https://github.com/Hurmatullah/English-Grammar-Corrector>