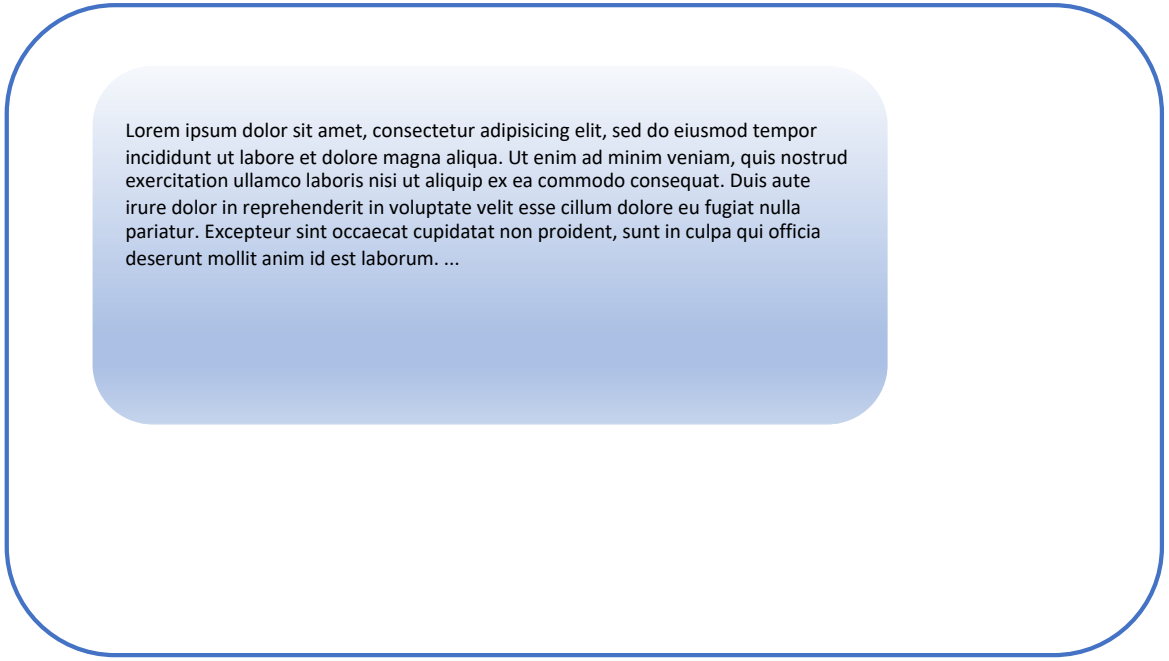
User screen

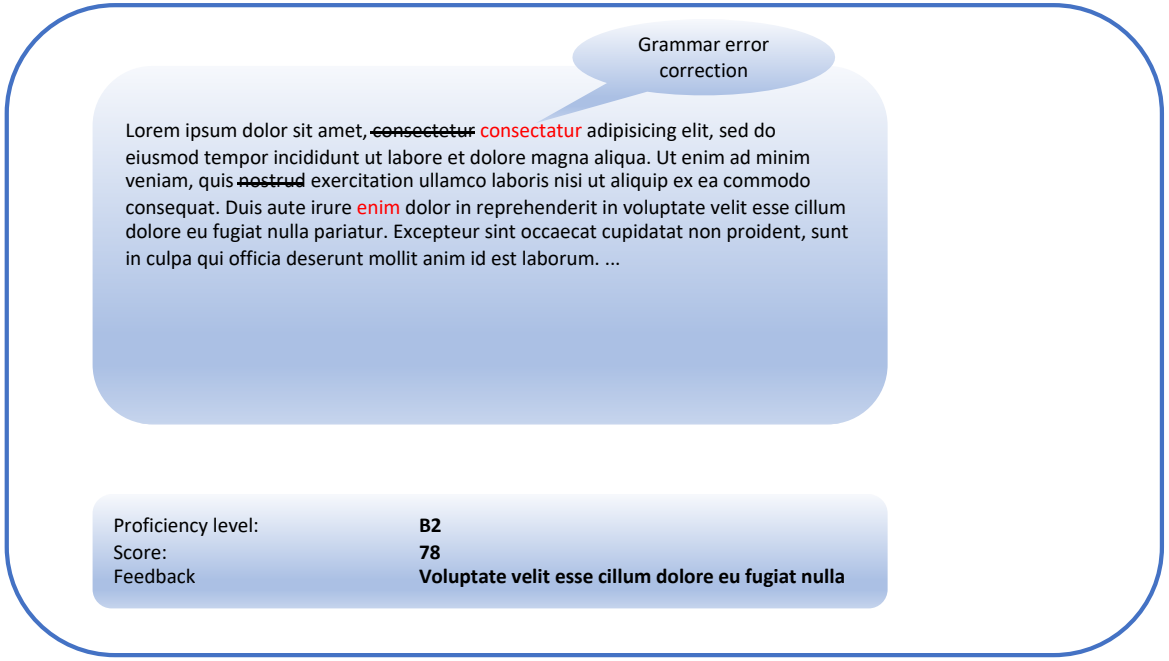


1920×1080

Automatic writing evaluation system

- A user (English learner) writes an essay.
- The system provides:
  1. **Language proficiency level**
  2. **Essay score**
  3. **Grammar error correction**
  4. **General feedback**
- Proficiency and Score are based on essay's *complexity*, *fluency*, and *accuracy* features.
  1. Complexity: not visible for the user
  2. Fluency: not visible for the user
  3. Accuracy: included in feedback

User screen – system results

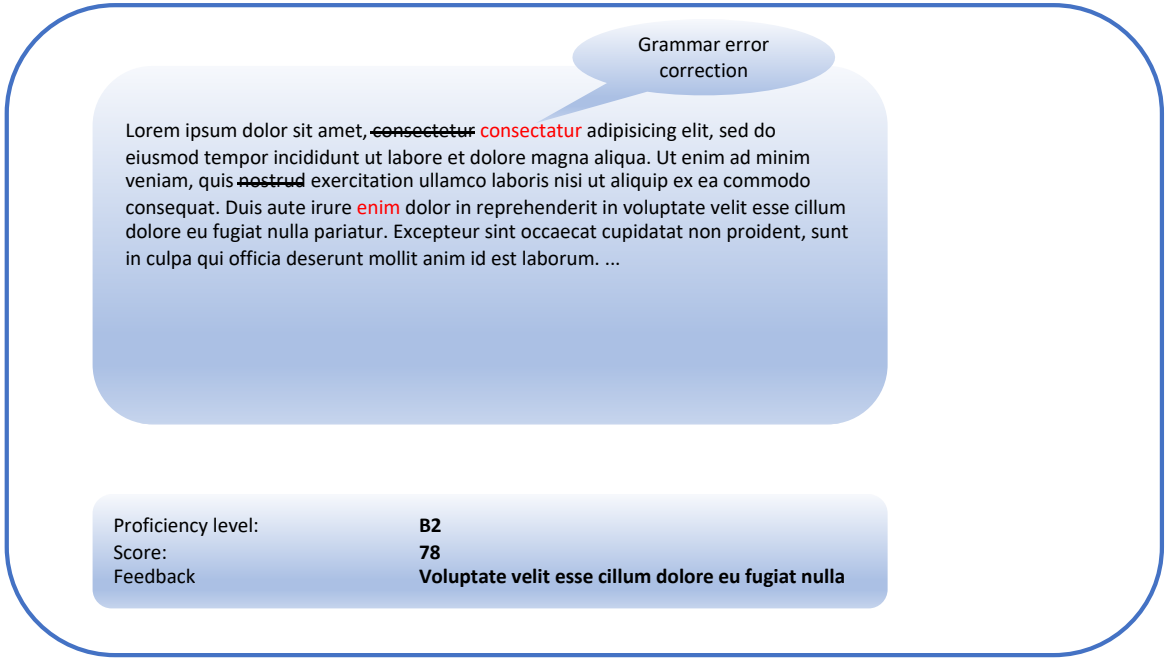


Automatic writing evaluation system

- Generally usuful in the classroom situation (e.g. grading, placement test)
  - Possible collaboration with *English Language Institute* @UBC
- Not computer aided writing (e.g. *Grammarly*) but it can work for helping writing, too.

1920×1080

User screen – system results



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Introduced techniques:

- **Transformer**-based classification: proficiency level and score
- **Seq2seq** for accuracy features
- **Language modelling** for fluency
- **Language generation** technique for feedback (2022-2023)

Current state:

- Implemented classification features (quantatitive and qualitative complexities including syntactic *complexity*)
- Language modeling (*fluency*)
- Seq2seq (*accuracy*) & spelling check is *in process*
- Lnaguage generation is *in preparation*
- Web interface is also *in* = (**Student internship@UBC, Summer 2022**)

references

- Lim, K., Song, J., & **Park, J.** (Accept with revision, March 2022) Neural automated writing evaluation for Korean L2 writing (submitted to *Natural Language Engineering, Cambridge University Press*).
- Qiu, M., & **Park, J.** (2019). Artificial Error Generation with Fluency Filtering. *Proceedings of the 14th Workshop on Innovative Use of NLP for Building Educational Applications (BEA2019)*, 87–91. https://doi.org/10.18653/v1/W19-4408
- Qiu, M., Chen, X., Liu, M., Parvathala, L. S. K., Patil, A., & **Park, J.** (2019). Improving Precision of Grammatical Error Correction with Cheat Sheet. *Proceedings of the 14th Workshop on Innovative Use of NLP for Building Educational Applications (BEA2019)*.