Web-based Annotation Interface for Derivational Morphology

Lukáš Kyjánek

kyjanek@ufal.mff.cuni.cz

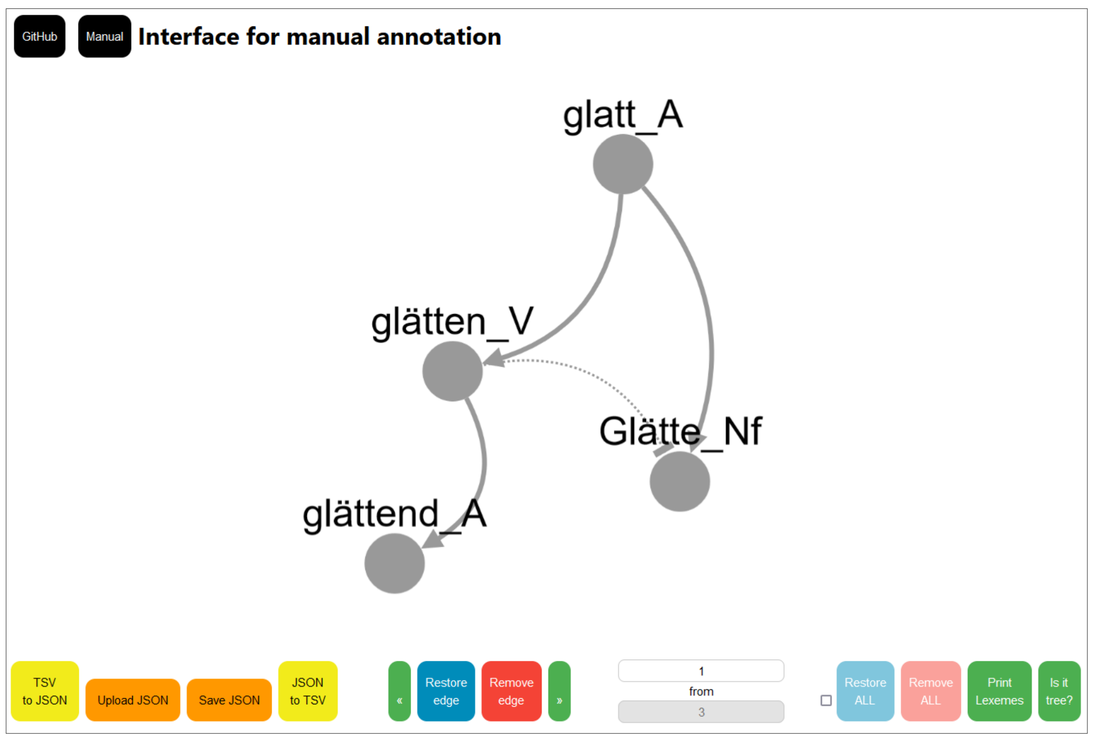
Charles University, Faculty of Mathematics and Physics, Institute of Formal and Applied Linguistics, Prague, Czechia

Summary

- Manual annotation of not only derivational morphology is easier and faster, and thus cheaper if the data is visualised.
- A simple **open-source visual interface** has been developed for manual annotation of *tree-shaped data structures*.
- **Annotators validated the interface** on derivational morphology.

Interface for Manual Annotation

- The interface is created as **web-based and responsive** to prevent problems with installation and work with various devices.
- It is programmed by using **simple techniques**: `HTML5`, `CCS3`, and `JavaScript` (`jQuery`, `CytoScape.js`, and `Notify.js`).
- It **works on a client's side** and processes `JSON` input/output.
- The interface screen consists of **top and bottom button bars** and a **central canvas** for data visualisation and annotation.
- It can delete/restore edges, search for an instance by typing its ID or characters into the textbox, and check treeness.
- It converts the input/output from/to traditional `TSV` format.

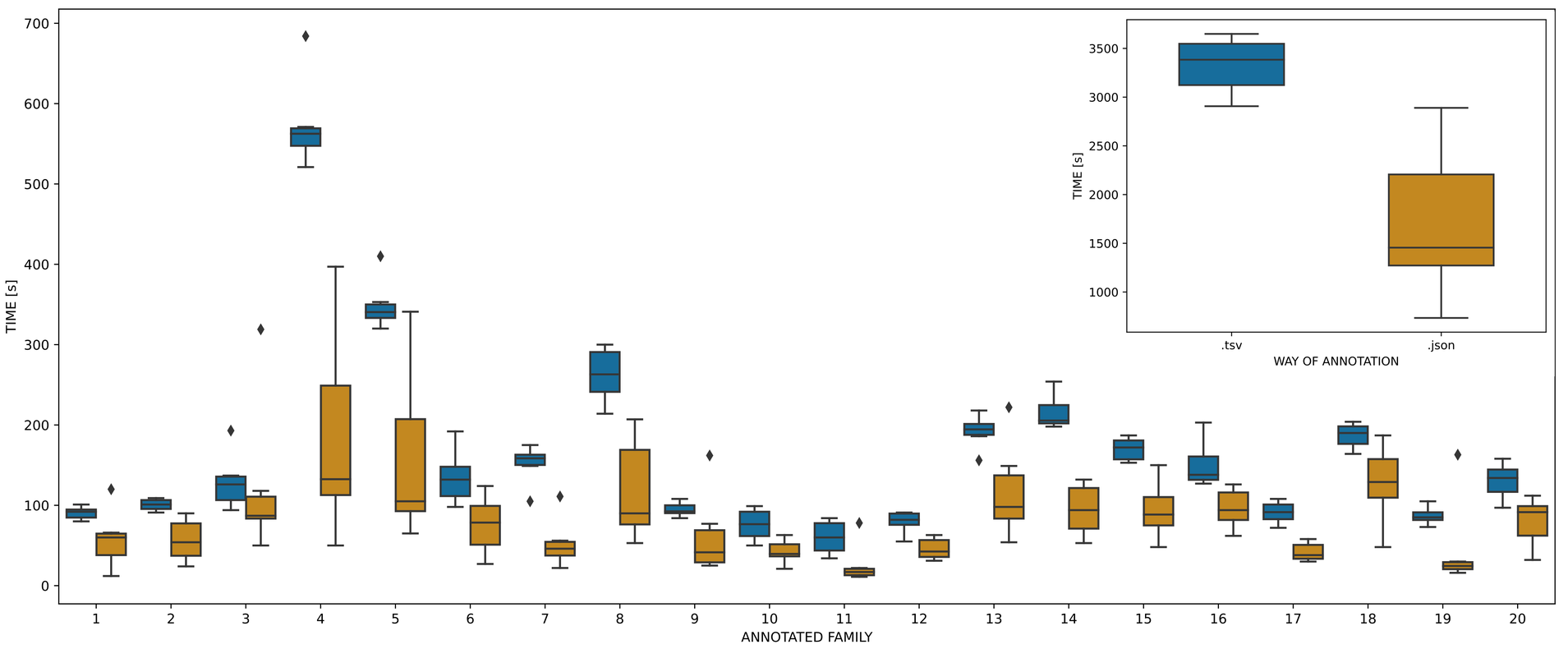


Human Validation

- Two methods of manual annotation were compared: **text processor** (`TSV`) *versus* **visual interface** (`JSON`) on a **sample of 20 derivational sub-families** from Czech.
- The experiment involved **12 human annotators** (university students of other than linguistic studies); half of them used text processor and the others used the interface.
- **Result:** ***The annotation process is faster if the interface is used instead of the traditional annotating in text processor.***

Conclusion & Future Work

- The **robustness** of the interface was **tested also on annotating syntactic data from *Universal Dependencies***. It worked well but implementation of new functions would be useful.
- **Takeaway Messages**
  - Developing the interface in collaboration with annotators is crucial as they provide necessary feedback to developers.
  - Although the interface is created by relatively basic techniques, it can save notable annotators' time and effort.



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