Using Active Learning for Assisted Short Answer Grading

- Short answer for assessing the knowledge.
- Fast and easy method for assisting short answer grading using active learning.
- Human in the loop.

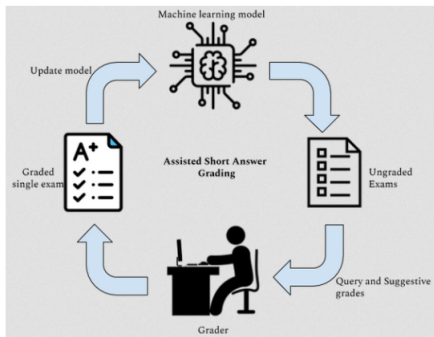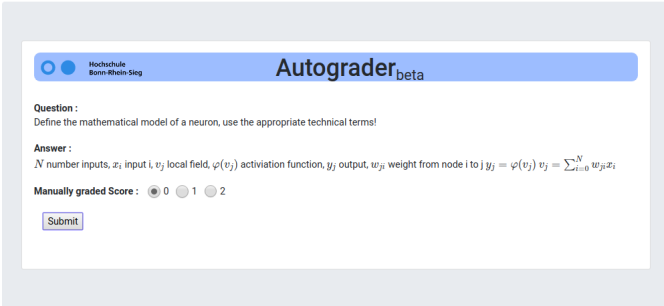Figure 1: Workflow of active learning in assisted short answer grading [1]

Figure 2: Querying stage of active learning in GUI

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1. Features used : Features from Sultan et al., 2016 (Length ratio, word alignment score, semantic vector similarity)
2. Learning method : Random forests.
3. Active learning sampling strategy : Least confident based uncertainty sampling.
4. Frameworks: Flask, Vue-js.

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Datasets	Clicks with active learning	Clicks without active learning
Neural network	338	680
SemEval 2013	3527	5104
Mohler'11	1386	2352

Table 1: Number of clicks required to grade the answers with and without active learning.

▶ Saves time.

▶ Less effort.

▶ Reaches the performance of supervised learning with less amount of graded answers for training.

Thank you!