Behavior

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ABSTRACT

Computer-aided education systems are now seeking to provide each student with personalized materials based on a student's individual knowledge. To provide suitable learning materials, tracing each student's knowledge over a period of time is important. However, predicting each student's knowledge is difficult because students tend to forget. The forgetting behavior is mainly because of two reasons: the lag time from the previous interaction, and the number of past trials on a question. Although there are a few studies that consider forgetting while modeling a student's knowledge, some

paper, we focus on modeling and predicting a student's knowledge by considering their forgetting behavior. We extend the deep knowledge tracing model [17], which is a

knowledge tracing datasets show that our proposed model improves the predictive performance as compared to baselines. Moreover, we also examine that the combination of multiple types of information that affect the behavior of forgetting results in performance improvement.

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