Math Word Problem Solver using Machine Learning

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Abstract*: This paper presents a deep neural solver to automatically solve math word problems. In contrast to previous statistical learning approaches, we directly translate math word problems to equation templates using a recurrent neural network (RNN) model, without sophisticated feature engineering. We further design a hybrid model that combines the RNN model and a similarity-based retrieval model to achieve additional performance improvement. Experiments conducted on a large dataset show that the RNN model and the hybrid model significantly outperform state of-the-art statistical learning methods for math word problem solving.*

Keywords: RNN, LSTM, MWPs, DOLPHIN 18K, GSM8K

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75

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