State of the Research

By: Mikhail Boulgakov, Silvia Gong, Lavanya Satyan
Advised by: Prof. McAuley
2018

It is important for sellers on Amazon to quickly answer users' questions. Amazon users often have to wait for their questions to be answered, which decreases their interest in purchasing products. To tackle this issue, we developed a model that automatically answers a user's yes/no question about an Amazon product using the information contained in the reviews for that product. We built upon Moqa, a framework that predicts the answer to a question using a bilinear regression between a bag of words representation of a review and a question.

Our specific goal was to improve the accuracy of the predicted answers by improving the measurement of the relevance of a review to the question. Improving the relevance helped us to determine which reviews contained the most useful and correct information, which allowed us to answer the question more accurately.

Given more time, we would extend our model to predict answers to open-ended questions. This would involve testing how well our relevance function for yes/no questions performs on open-ended questions and changing the output of our voting function (currently outputs a yes/no answer). Additionally, we would hand label question and review data from Amazon categories other than the Tools and Home Improvement category and test our model on this data. Lastly, we would implement and test more complex models for the voting function as opposed to a logistic regression.