

# ***Masters Final Oral Defense***

***Tuesday, April 24, 2018***

***223 Atanasoff Hall at 4:00 PM***

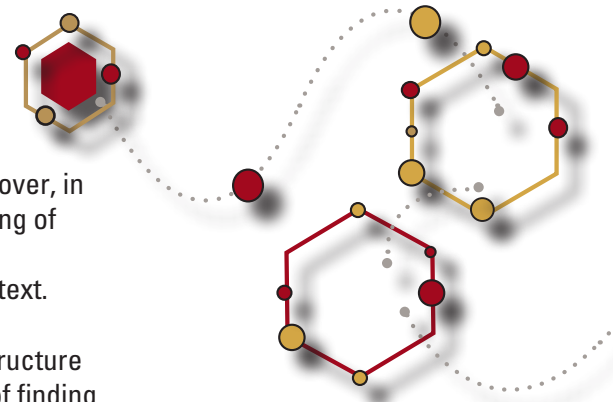
***Sonal Garg***

## ***Neural Question(Gap) Generation and Relevance Classification***

Nowadays, self-motivated learners are moving towards Internet to obtain knowledge through text, in the form of articles and reading comprehension. Moreover, in educational settings instructors and students in order to assess their understanding of data, turn to the methods of testing.

One such method includes testing by generating questions related to the text. The goal here is to generate automatic factual questions from complex English paragraphs in reading materials. Previous work focuses on grammaticality and structure of the generated questions. Whereas, this work emphasizes on the other aspect of finding which part of the sentence is important and what questions should be asked first. This work introduces a sequence-to-sequence learning method, using words and characters as entities. This type of data-driven neural-based approach eliminates the reliance on handcrafted rules and deep Natural Language Processing knowledge used in existing approaches. The results show that the good answers(gaps) are not only based on named entities but are of variable length and comparable to the answers (gaps) generated by human judges. Performance of the methods proposed is tested on crowd-sourced data generated by linguists to preserve the naturalness of questions.

***Major Professor:***  
***Sowmya Vajjala***  
***Jin Tian***



***Committee Members:***  
***Forrest Bao***

**IOWA STATE UNIVERSITY**  
**Department of Computer Science**

[www.cs.iastate.edu](http://www.cs.iastate.edu)

