

- [1] “Definition Modeling”, Noraset et al., 2016  
**Gist:** Describe the problem of definition modelling and generate definitions from an input word with RNN model.  
**Summary:** Definition modeling was initially described by Noraset et al. Their research is based on a recurrent neural network language model [2] with a modified recurrent unit. They use the word to be defined placed at the beginning of the definition so the model will see the word only on the first step.
- [3] “What Does This Word Mean?”, Chang and Chen, 2019  
**Gist:** Instead of generating text, use a classification approach based on  $k$ -nn.  
**Summary:** Chang and Chen explore contextualized embedding for definition modeling. They reformulate the problem of definition modeling from text generation to text classification. Their results show state-of-the-art performance on the task of definition modeling.
- [4] “Bridging the Defined and the Defining”, Washio, Sekine, and Kato, 2019  
**Gist:** Use context sentences to generate better definitions.  
**Summary:** Washio, Sekine, and Kato proposed a method for context-based definition modeling that considers the semantic relations between both the word to be defined and the words in the definition. They apply semantic information to both the definition encoder and decoder.
- [5] “Exemplification Modeling”, Barba et al., 2021  
**Gist:** Reverse definition modelling - generate examples (context sentences) from definition.  
**Summary:** Barba et al. introduce exemplification modeling, an adjacent problem to definition modeling that uses a definition embedding to generate possible example sentences. They use a sequence-to-sequence based approach and show near human-level annotation performance. Their problem is similar in that they use the definition as context to create example sentences.

## References

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