



## Entity and Relation Extraction from Chatlogs

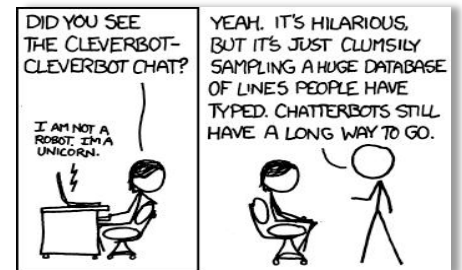
### Motivation

Dialogues accompany us on a daily basis in our lives; be it on social media like Facebook and Twitter, or instant messengers like WhatsApp. Recent advances in Deep Learning led to an increasing popularity of virtual assistants like Amazon's Alexa or Apple's Siri and the development of increasingly sophisticated chatbots. However, current systems only work well in very pre-defined settings. The need for large amounts of training data impaired with informal speech makes it difficult to train neural networks which generalize well to new domains. A key challenge is to recognize entities and to identify their relations across different dialog turns.

The goal of this thesis is to investigate several approaches for entity recognition in chatlogs as well as finding and identifying relevant links between different entities.

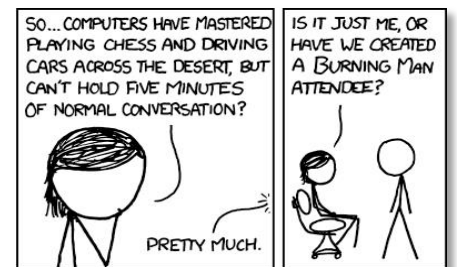
### Task Description

- Explore different strategies for entity extraction and discovering their relation from chatlogs using Deep Learning
- Investigate their applicability to small data scenarios
- Evaluate the viability of the approaches on real-world data



### References

- Shum H-Y., He X-D., and Di Li. "From Eliza to Xiaolce: challenges and opportunities with social chatbots." *Frontiers of Information Technology & Electronic Engineering* 19.1 (2018)
- Arzoo K., and Cardie C. "Nested named entity recognition revisited." *NAACL-HLT*, Volume 1 (2018)



### Contact

Analysis	■ ■ ■ ■ ■ □
Programming	■ ■ ■ ■ ■ □
Literature	■ ■ ■ □ □

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