NLP Lab Mid-Term presentation

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What would we do ?

- Implementation of a Chatbot based on the paper “Key-Value Retrieval Networks for Task-Oriented Dialogue” by ERIC, Mihail; MANNING, Christopher D, *arXiv preprint arXiv:1705.05414*, 2017

Dialogue System

DRIVER: I need to find out the time and parties attending my optometrist appointment.

CAR: I have 3 appointments scheduled, with Alex, your sister, and Jeff. Which are you referring to?

DRIVER: I want to know about the one that Alex is joining me at

CAR: That optometrist appointment is at 4 pm.

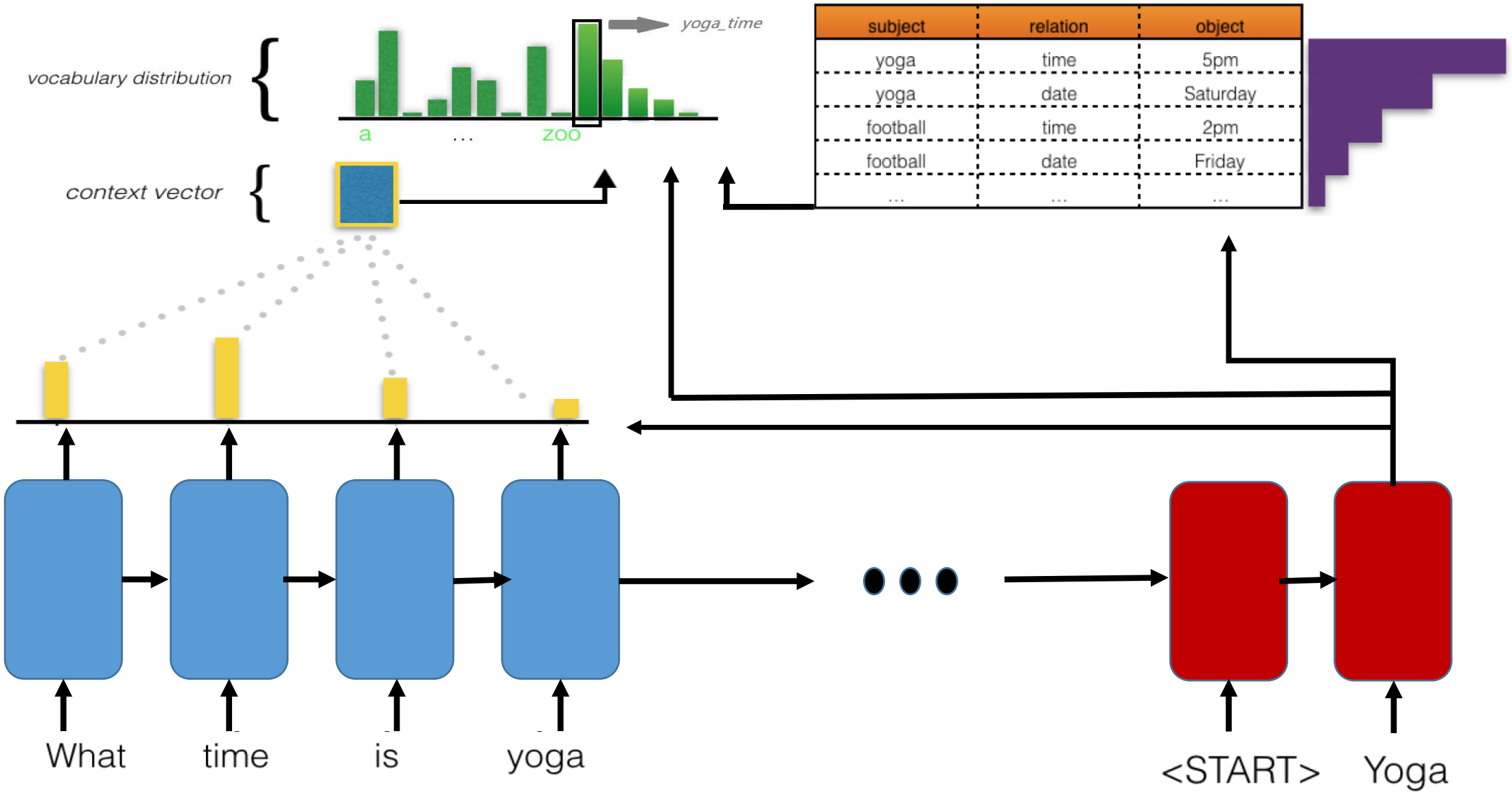
DRIVER: Thanks

CAR: no problem

Key-Value Retrieval Networks

- Sequence to Sequence model based on LSTM network
- Uses dual attention: One on encoder states and one on Key-Value knowledge base.

Network Structure



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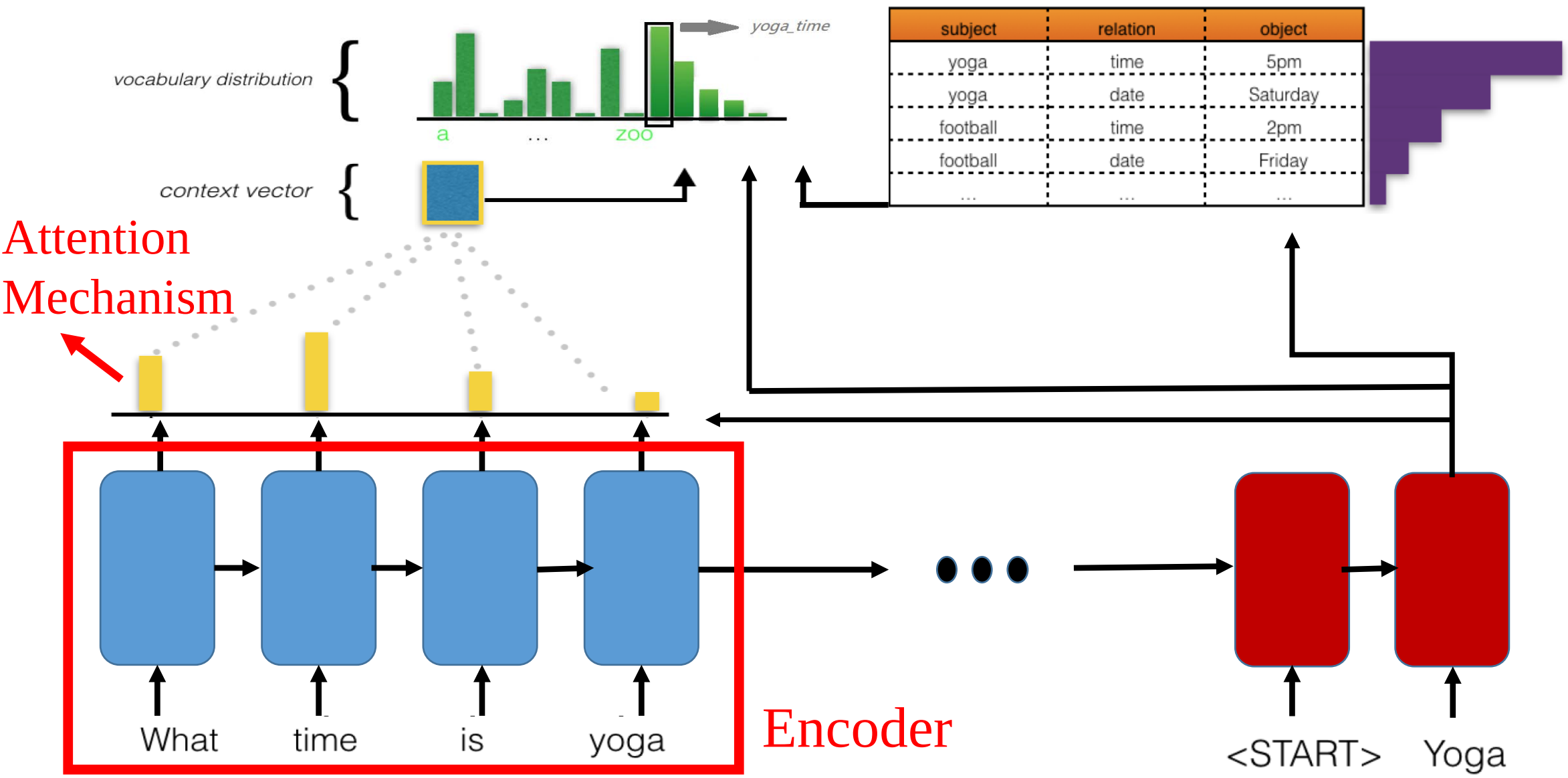

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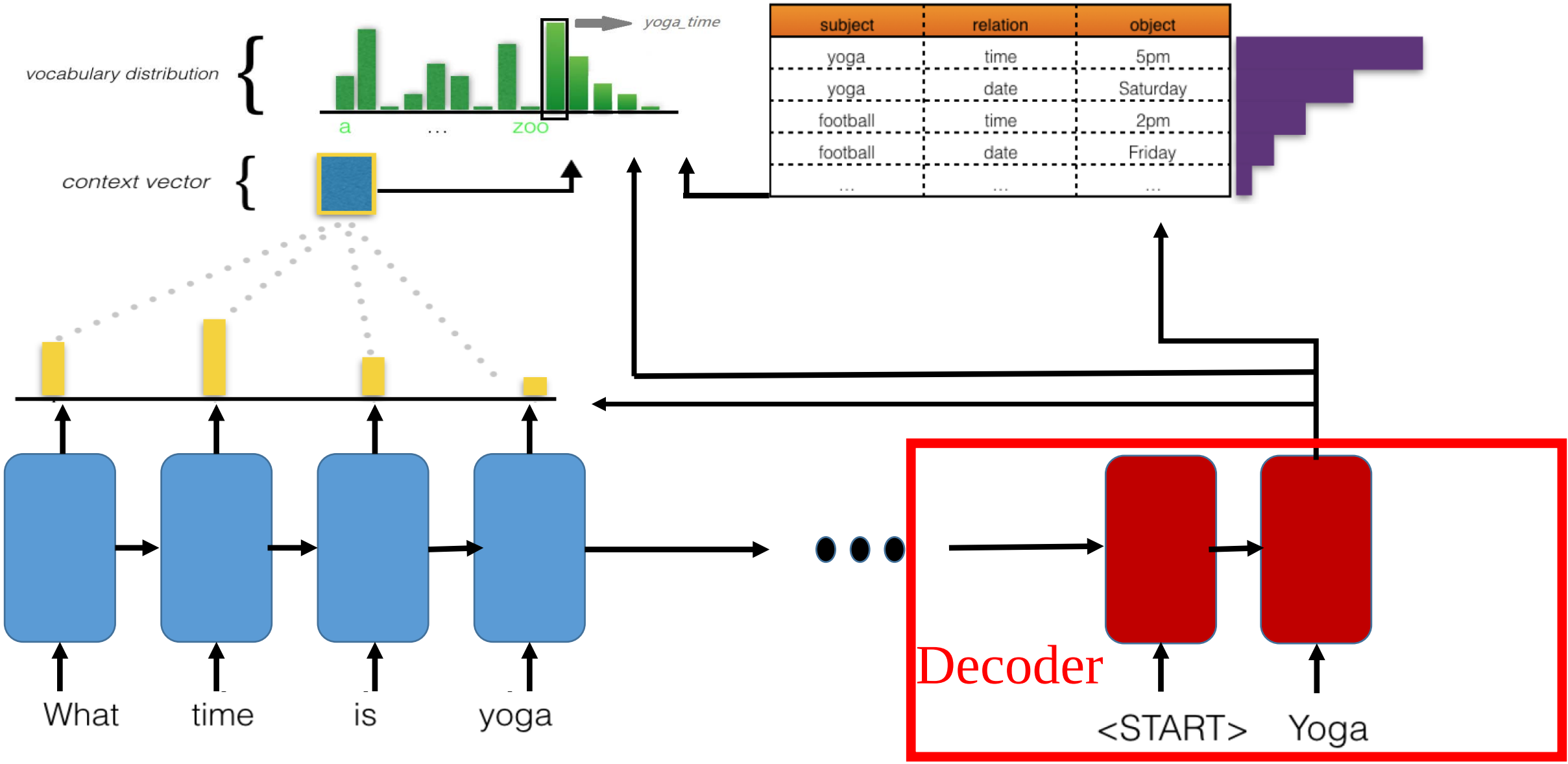

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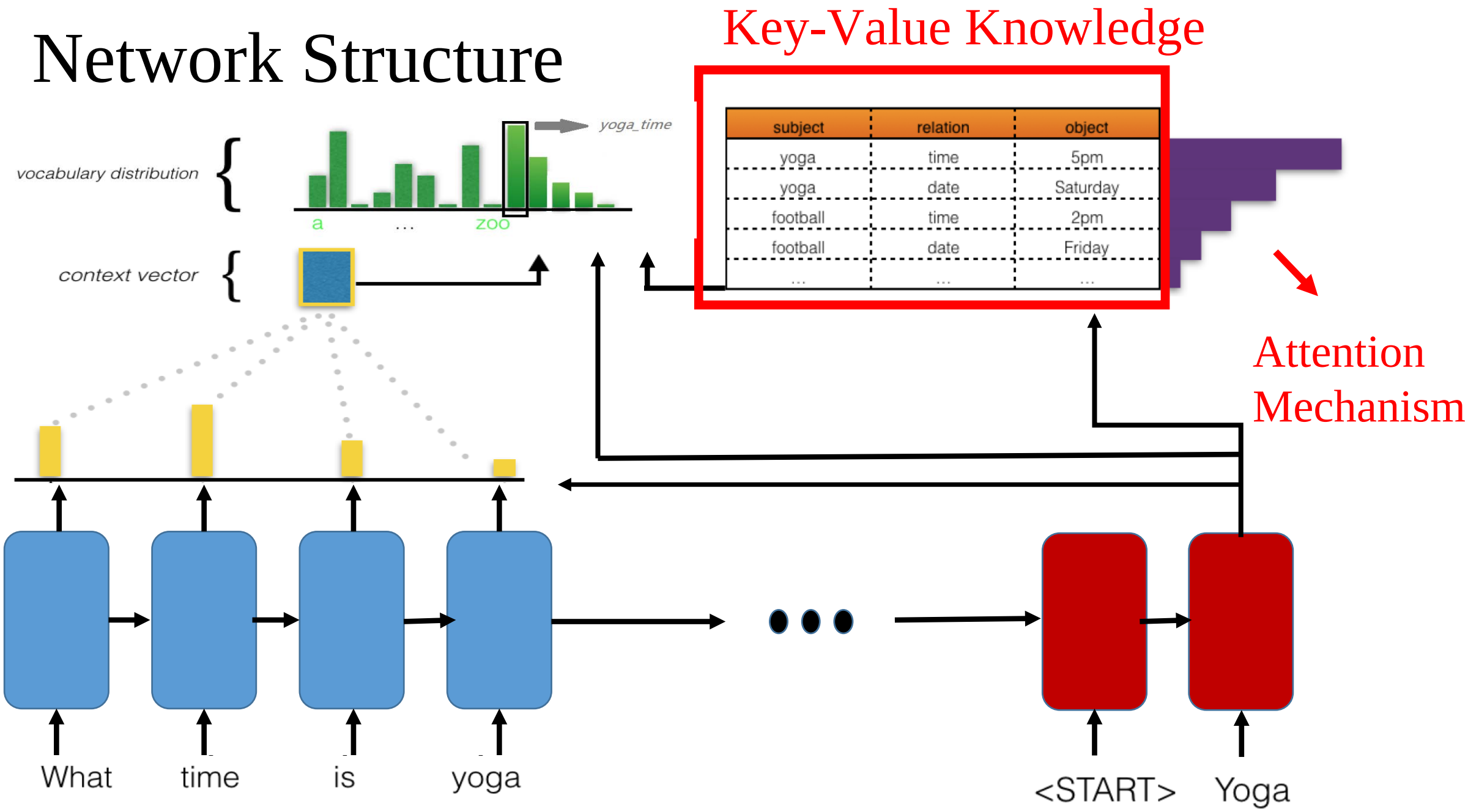

Scope of work

1. Read and understand paper
2. Read and understand Keras code (a github implementation exists)
3. Translate it to a pyTorch implementation with better documentation
4. Replicate evaluation results from paper
5. Prepare a report for final submission
6. If time permits, use better embeddings for knowledge base

Objective

1. Learn seq2seq networks
2. Learn attention
3. Learn memory networks
4. Learn keras and pyTorch
5. Explore better knowledge base embeddings

Thanks !