QA

answer:

- Answer is a simply a word. Yes/No 对于多个 choices
- multiple choices — knowledge source, question, choices
- span in source / extraction-based — squad, DRCD (中文版的squad)
- free answer generation — know what you don't know — MS MARCO (微软), DuReader (百度)

seq2seq

S-net

extraction-based method (比seq2seq easy 许多)

→ [CLS] or Yes/No or train answer verifier → Yes/No

DrQA: retriever, reader

V-net: vote 最多的 answer

Types of questions

Simple question: match & extract — query-to-context attention, context-to-query attention } BiDAF

Complex question: reasoning — Dataset: DangoRoo. HotpotQA, DROP

Solution: multiple-hop → Memory network

how many hops do we need? q → match → extract + match → extract

ReasoNet

dialogue QA

D Q1

D Q2

D Q3

attention

Graph Neural network

如果 fine tune with Bert 则不需要

: self-attention 相当于 fully connected network.

Chatbot. controllable response generation

How are you? ——> Chatbot ——> I'm good.
persona(人物设定) ——> Chatbot <—— emotion <—— character
seq2seq

Challenge 在于. 1. The same input can have different response

2. Inconsistent. 前言不对后语

3. usually chooses short and boring sentences.

Approach 1: directly fine-tune
limited data is easy to overfit.

MAML: initial parameters only need a few dialogues samples to adapt

Approach 2: control by condition!
persona-based model (16).
data: persona-chat
TransferTransfo

Approach 3: monologues only
独白
Rank
multiply
Pseudo data. 假若 response -> input

GPT-2. 來train Simple TOD (end to end)
user input
↓
belief state
↓
DB search
↓
Action
↓
response

Next step. control the response of interlocutor

Dialogue state tracking (DST). as QA
state: summarization A set(key, value). infinite values. as QA
key: domain slot; values e.g. time, phone number
dataset:
MultiWOZ 2.0 hotel. train. attraction. restaurant. taxi.
SGD (有点 artificial)