Ask.me

Answer real questions using Wikipedia content

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Summary

- Reminder on the subject

- What we have done

- Issues encountered

- Ongoing work

- Future work

Reminder on the subject

- Extracting the subject of the question

- Finding the most relevant wikipedia article given this subject
  + the most relevant subpart of the article

- Giving the question and the subpart to BERT so it can find a pertinent answer

- Having a website interface for our question-answering system
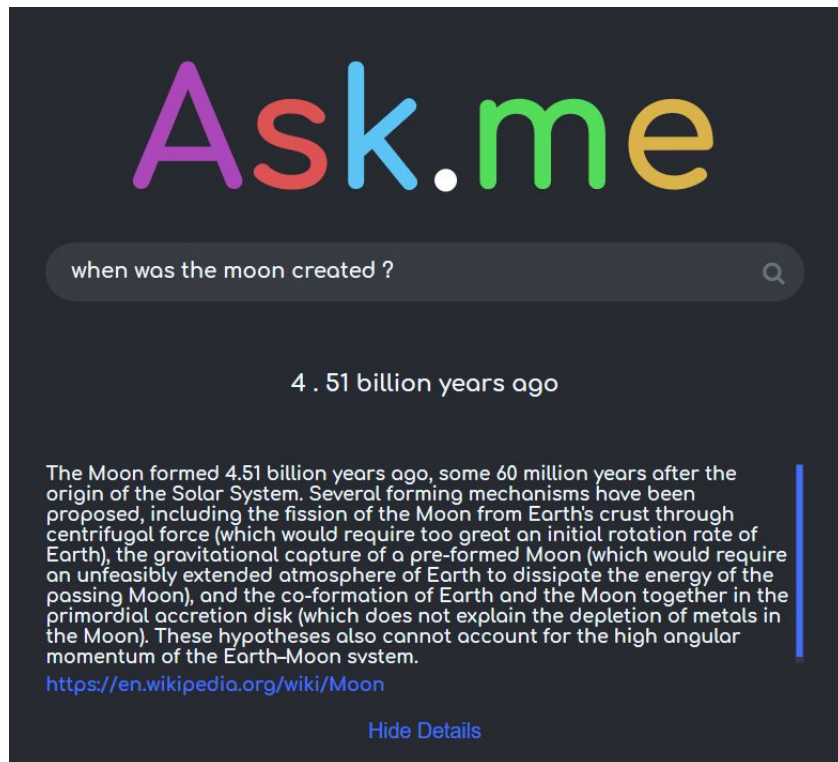
What we have done

Solve previous issues and improve the system :

- **Subject Extraction** : Basic rules showed weird results for subject extraction. We extended the rule by using a combination of NER and noun-chunks extraction to solve the issue.

- **Article Retrieval** : Our way of dealing with the API produced weird results : sometimes it gave to the model an article that wasn't related to the question. We ameliorated our system by combining a new wikipedia-oriented library to the one we already used. This new article retrieval system is now most of the time able to correctly find the most relevant article related to the subject.

- **Website implementation** : Our work is now directly integrated on the website, which gives a good idea of what the final version will look like.

Implementation

- Display Answer

- Display the paragraph where the answer was found

- Link to the wikipedia page

Issues encountered

- **Disambiguation :** find a way to handle multi sense word (e.g ''What is a python ?'')

- **Paragraph selection** / **time computation :** Currently looks at 15 first paragraphs of the article (to **limit computation time**), computes answer for each and retrieves answer which has the highest confidence.
  Would like to find new ways to **select pertinent paragraph** without processing all articles or losing information.

Ongoing work

- Developing functions that are able to detect the type of question. Our model is only able to answer to factual general knowledge questions. Goal : Tell the user that we can't answer his question, in a natural way.

- Checking other similar projects to see if we can find new ideas to improve our current solution.

Type	Examples
Yes/No	*Is the earth flat ?*
Pseudocleft	*What she says is true.*
Comparative	*Is the Moon bigger than Mars ?*
Subjective	*What is Madonna's best album ?*
To App	*What's your favorite color ?*
Tutorial	*How to unlock a closed door ?*
Technical	*What is the treatment for pharyngitis ?*
Personal	*Should I talk to my ex again ?*
Factual	*When is Barack Obama born ?*

Future work

- Continue working on question-type detection

- Find more efficient ways to select paragraphs

- Find a way to deal with disambiguation

- Check if it is possible to extend our system to other languages

- Check if it is possible to extend our system to answer Yes/No questions too

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Thank you for your attention

Questions ?