Automated Question Answering System

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Description

When we visit various web sites or electronic forums, we experience the ability to ask questions online and get answers in real time. Having such a system offers the users the sense of discussing with someone in real time, the sense that their questions will be answered and that service is provided. From a company/organization perspective this is a valuable service but it is too costly if it is to be support by real people.

So we employ technological solutions and there are various technologies behind such systems. Mainly these technologies are referenced under the general term of "Question Answering Systems" and more recently under the term of "Chatbots". These technologies are partly semantic, since they try to organize the knowledge of the specific domain in a more formal way so to be able to navigate into it. They rely also (especially recently) in high level Natural Language Processing (NLP) techniques in order to extract and understand the text given by the user and transform it to something already known by the system. Many of these techniques rely also on the use of Neural Networks (NN) both Convolutional (CNN) and Deep (DNN).

We suggest that we create such a system for the Department Sciences Informatiques of CY in order to be used to provide information and answer questions of prospective students. We will need to collect and analyze various types of information like description of the offered degrees and programs, descriptions of the department and the university, descriptions of the people involved.

The works will be organized in various steps:

- Collect the necessary information / data
- Semantically organize the information
- Create an NLP-based system that will automatically translate user questions to questions (and thus answers) already known by the system
- Try to approximate the questions that cannot translate to the "closest" ones
- Provide in an intuitive way answers to the users online and in (almost) real time.

This project is better fitted for students of M2, groups of 3 and above.