

Digital Fruits For Lunch: Feeding Embodied Conversational Agents With Wikipedia Knowledge

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Recent advances in Artificial Intelligence and Natural Language Processing have enhanced the vision of using embodied conversational agents as an interaction paradigm for accessing the Web of Data [1]. One important aspect of such knowledge intensive expert systems is that they decisively depend on the availability of machine-readable (semi-) structured knowledge resources. That is, being able to automatically explore the wealth of (encyclopedic) information about the world in a structured manner. Question Answering (QA) plays an important role in this context, since it endows conversational agents with the capability of understanding and answering natural language questions asked by human users.

We describe the architecture of an open domain QA system for our embodied conversational agent Max which integrates a large amount of available common-sense knowledge drawn from Wikipedia. The QA engine utilizes an open topic model [2] as a reference point for context detection, object disambiguation and hypothesis generation. It includes different linguistic filtering methods and natural language pattern matching components which additionally enable to access the RDF-based dataset provided by the DBpedia project [3]. The resultant QA component shall invite human dialog partners to ask natural language questions and to explore the encyclopedic knowledge of Wikipedia just by means of interacting with our conversational agent Max.

References

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