INTERNSHIP PROPOSAL : First Impression Management

Where:

Institut des Systèmes Intelligents et de Robotique, Université Pierre et Marie CURIE, Pyramide, 4 Place Jussieu, 75005 Paris

Duration:

5-6 months, starting from January 2018.

Background:

Embodied Conversational Agents (ECAs) are virtual entities with human-like appearance. They also communicate verbally and nonverbally. They are used as interface in human-machine interaction taking several roles, such as assistant, tutor, or companion. They are endowed with communicative capability, that is, they can dialog with humans using verbal and nonverbal means.

In the context of IMPRESSIONS project, we investigate the first impressions generated by an ECA. First impressions in this context are critical, since they affect user's engagement and willingness to continue the interaction. By managing non-verbal behaviours exhibited by the virtual agent we may improve its first impression on the user. Our purpose is to build a computational model of agent's mental state in order to make the agent capable to choose the right non-verbal behaviours during the first moments of an interaction with a human, and to adapt its behaviour according to user's reactions.

Intended tasks:

- Implementing an existing computational model of the agent in the Greta/VIB platform;
- Designing and implementing a behavioural experiment in order to investigate users' behavioural reactions to the virtual agent. Kinect and the tool Eyesweb (http://www.infomus.org/eyesweb_ita.php) will be used to extract relevant features (e.g. weight shift, facial expressions, etc…) related to user's attention and engagement.
- Analysis of the collected data by using statistical and machine learning techniques, in order to find patterns of user's reactions linked to the non-verbal behaviours displayed by the agent.
- Planning how to improve the computational model of the agent, in light of the obtained results.

Required skills:

- Programming skills: java
- Statistical analysis
- Machine learning

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