

1. A Chatbot that is able to learn new skills without the intervention of a developer

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During the last few years, chatbots have become more and more sophisticated and complex. They already provide basic assistance to humans on different online platforms but also in other places.

The vast majority of chatbots have been designed to excel in a well-defined use case (with well-defined functionalities), such as in providing customer assistance or in offering basic information on a requested topic. Any extension of those chatbots requires the intervention of a developer.

The purpose of this project is the development of a chatbot which can extend its knowledge by learning from users or even automatically.

2. Chatbots Collaboration

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The vast majority of chatbots have been designed to excel in a well-defined use case, with well-defined functionalities.

The purpose of this project is the development of a chatbot that can recognize different topics/intents, then, according to the recognized topic/intent, it communicates with another chatbot (that has knowledge over that topic/intent) to pass the request of the user and to get the answer, the finally the bot will provide the obtained answer to the user.

To validate this project, multiple chatbots should be developed together with the main chatbot, each specialized on a specific topic/intent.

3. Chatbots - A Way to Motivate Behavior Change

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In everyday life, each person takes a significant number of decisions (such as the decisions on what to buy in a supermarket, what to eat, what to drink, what to wear, what transport way to use...). Some of those decisions may affect the current life of the person, his/her future but also the future of mankind.

With an expanding access of decision supporting technologies sustainable development with the help of modern interfaces has become a subject for discussion.

The purpose of this project is the development of a chatbot that will help people to rethink the decisions that they are tacking, by providing feedback for the user regarding the decision that he/she took, it consequences and a better alternative.

4. Emotion Recognition for Robots

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Knowing the emotional status of the user allows a robot to make the discussion between the user and the robot more natural from the user perspective by giving the possibility to the robot to change the tonality of the voice and/or to act in a manner that suite better the current emotional status of the user.

The emotion of the user can be identified from several factors, two of those factors being the voice and the facial expression of the user.

The purpose of this project is the development of a solution that will enable a robot (Pepper and/or TIAGo) to detect in real time the emotion of the user based mainly on the voice of the user (depending on the case facial expression can be also used).