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# ARTIFICIAL INTELLIGENCE USAGE
# IN INTELLIGENT SYSTEMS

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We are pursuing the science & technology involved in enabling robots to play important helpful roles in hospitals, schools, elder care, care centers, and eventually homes. The integration of cognitive components will be based on cloud computing. Thus, two key activities are being realized within the package: a cloud-based intelligent system and research in human-robot interaction.

*Keywords* – **artificial intelligence, cloud robotics, human-robot interaction, robotic systems.**
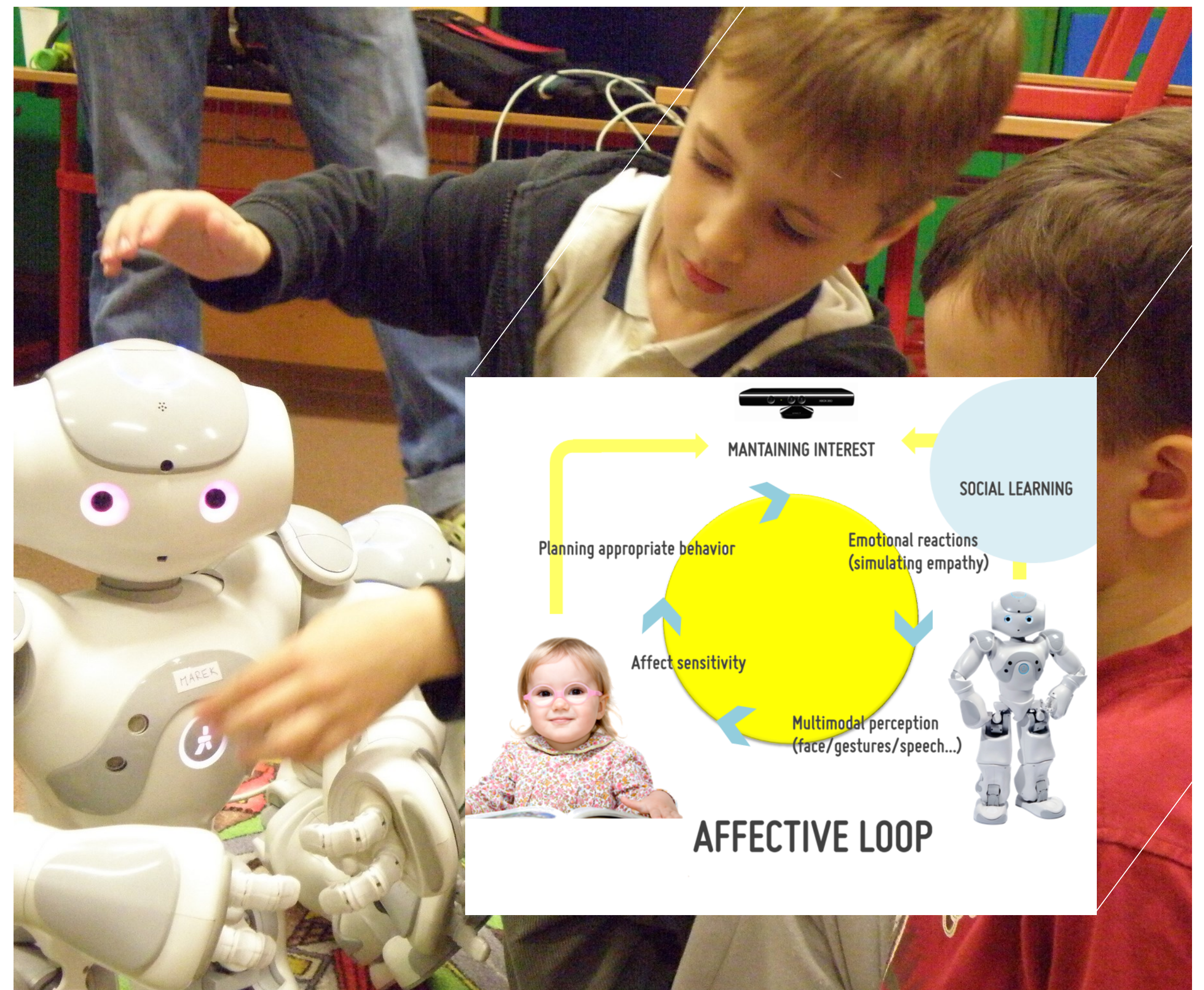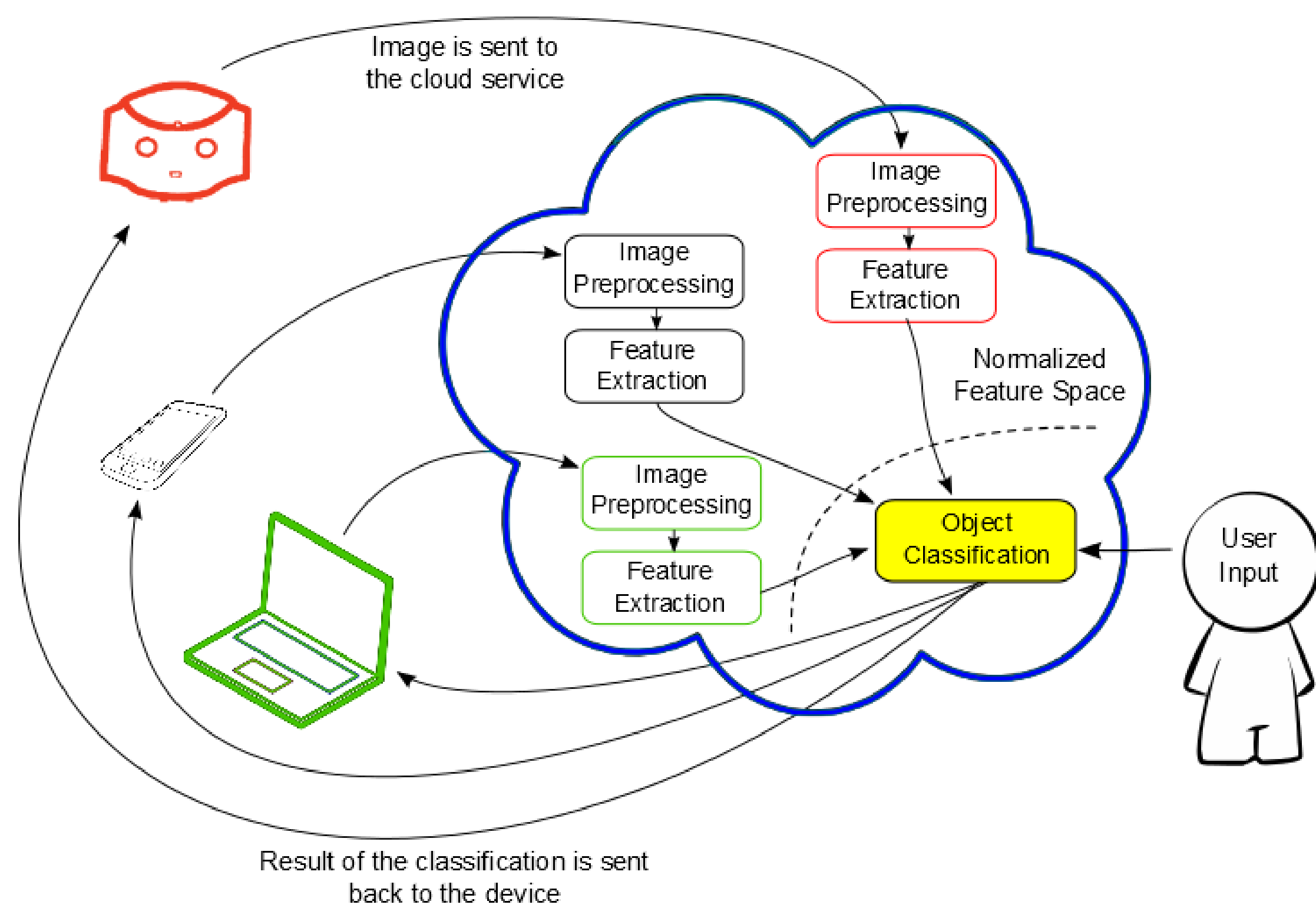
# INTELLIGENT SYSTEM ON CLOUD

A structure of system for knowledge sharing support between different robotic systems is being implemented, together with services consisting of modules for object recognition, image processing, image transmission and teleoperation.

These modules will process and integrate different knowledge received from several agents and store them into knowledge database, what is a key issue for knowledge sharing between agents and also ensuring distributed learning.

# HUMAN-ROBOT INTERACTION

From research point of view, we address complex research challenges that comprise social human-robot interaction, including the understanding of the user's state, activity, and intentions; methods for natural human-robot interaction; means of establishing and sustaining engagement; providing customized, adaptive, and personalized interaction; and achieving measurable outcomes.

The robots rely on adaptive and sustainable non-verbal interaction, taking an embodied perspective to affective interaction.