



# BOSCH

## Master Thesis:

### **Cognitive User Management System for a robotic assistant with facial and speaker recognition**

With the increase of connected devices in homes and the new possibilities for seamless interaction with the devices in the context of a smart environment, it becomes more important that the robots are able to identify the interlocutor to provide an adequate feedback. In the meantime, there has been an increase in the offer for cognitive solutions from both open as well as closed source developers. The purpose of this thesis is to implement an automatic user recognition by means of facial and speaker recognition and adapt the behavior of the system applying machine learning technologies to the wishes of each user.

#### **Tasks:**

- Research state-of-the-art in the target technologies
- Develop and evaluate proof-of-concept implementations from defined alternatives
- Develop integrated solution from the selected providers including all required features
- Evaluate and document resulting implementation

#### **Qualifications:**

- Experience in Object Oriented Programming (Java, C++)
- Experience in Web Technologies (Node.js, HTML5, REST)
- Experience with versioning tools and collaboration in teams (Git)
- Knowledge in Machine Learning technologies is a plus
- Ability to work independently and in teams
- Good English knowledge

#### **General Conditions:**

Start: As soon as possible

Duration: ~ 6 months

Scope: Full-time

We offer you the opportunity to work hand-in-hand in exciting topics with a highly professional and dynamic team developing in state-of-the-art solutions for the future of home appliances.

#### **Contact:**

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