



# KRISTINA

## A Knowledge-Based Information Agent with Social Competence and Human Interaction Capabilities

### KRISTINA at a glance

*a Knowledge-based infoRmation agent  
with Social compeTence and human  
INteraction cApabilites*

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**EC Contribution:** € 3.633,801 €



In Europe, migration is tradition, and this is not free of challenges. Especially in the case of care, migrants, often face a double challenge: (i) not to speak the language and not to be acquainted with the culture of the resident country, and (ii) be unfamiliar with the care and health administrations of the country. To overcome these challenges, KRISTINA will research and develop technologies for a human-like socially competent and communicative agent that serves for migrants with language and cultural barriers in the host country as a trusted information provision party and mediator in questions related to basic care and healthcare.

#### Objectives

KRISTINA addresses the following objectives:

- Dialogue management in culture-specific contexts.
- Vocal communication analysis in noisy and emotionally charged contexts (Arabic, Polish, Turkish).
- Culture-specific mimics and gesture analysis.
- Web-oriented search of medical information.
- Semantic representation and reasoning over knowledge spaces in the context of dialoguing.
- Generation of integrated expressive multimodal and multilingual communication.

#### Use Cases

KRISTINA will validate the developed technologies through two different use cases:

- 1) In a geriatric context, assisting the interaction with (a) elderly migrants with Turkish background and with their relatives, and (b) care personnel with Polish migrant background.
- 2) In a healthcare centre context, providing (a) communication with North African migrants attending a medical centre, and (b) information to North African migrants in a home setting.

#### Impact

KRISTINA will achieve the following impacts:

- 1) Improve multilingual speech processing.
- 2) Lead an important minority of citizens out of isolation.

#### Outcome

The final outcome of KRISTINA includes:

- 1) The final KRISTINA virtual agent.
- 2) Research modules and services (e.g. speech synthesis, semantic reasoning, face and gesture recognition), under commercial, open source or freeware licenses.

#### Partners

Universitat Pompeu Fabra



Universitat  
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Center for Research & Technology Hellas



Universität Augsburg



Almende BV



Vocapia Research



Universität Tübingen



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