

IMAGINATION TO REALITY

Emotion Recognition and Expression Framework (EXEr)



Technology Overview

Traditional Human-Robot Interaction has always required its human counterpart to perform direct inputs. I²R's Emotion Recognition and Expression Framework (EREx) classifies the emotions of its human counterpart together with an enabled robotic platform to express emphatically through sound and motion.

Providing the capabilities of developing a richer human-robot interaction that goes beyond traditional input, the robots can now interact emphatically, showcasing a personalised touch that truly warms the hearts of individuals.

Technology Features

Emotion Recognition & Expression Framework

Sound Event Classification

Unified Robotic Brain

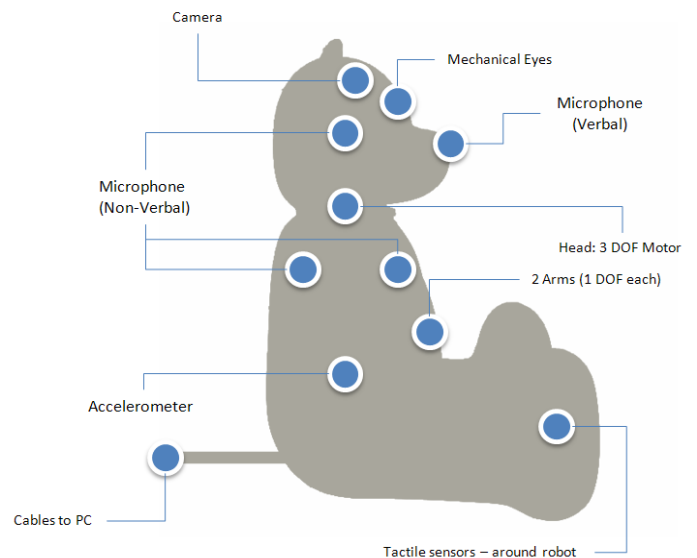
Face Tracking

Verbal

Non-Verbal

Tactile sensing

Facial Emotion Recognition

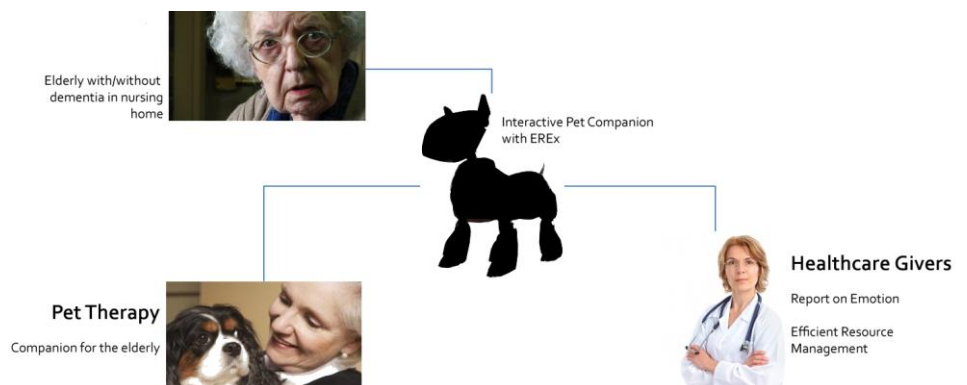


Potential Applications

- Companion robots for the elderly
- Edutainment platforms
- Therapeutic robots for autistic children
- Healthcare therapy platforms
- Homeland security and surveillances
- Interactive toys
- Electrical appliances

Benefits

- A robotic platform that truly empathises its human counterpart
- A framework that enables a wide range of applications to recognise emotions of its users for richer human and robot/computer interaction



Contact Us

Industry Development Department
Institute for Infocomm Research (I²R)
1 Fusionopolis Way, #21-01 Connexis (South Tower), Singapore 138632
Tel: (65) 6408 2000 Fax: (65) 6776 1378 Email: inddev@i2r.a-star.edu.sg
www.i2r.a-star.edu.sg