

Confidence: Ubiquitous Care System to Support Independent Living

MITJA LUŠTREK¹, BOŠTJAN KALUŽA¹, BOŽIDARA CVETKOVIČ¹, ERIK DOVGAN¹, HRISTIYAN GJORESKI¹, VIOLETA MIRCHEVSKA², MATJAŽ GAMS¹

mitja.lustrek@ijs.si

¹ Department of Intelligent Systems, Jožef Stefan Institute, Jamova cesta 39, Ljubljana, Slovenia

² Result d.o.o., Bravničarjeva 11, Ljubljana, Slovenia

<http://dis.ijs.si/confidence>

Problem

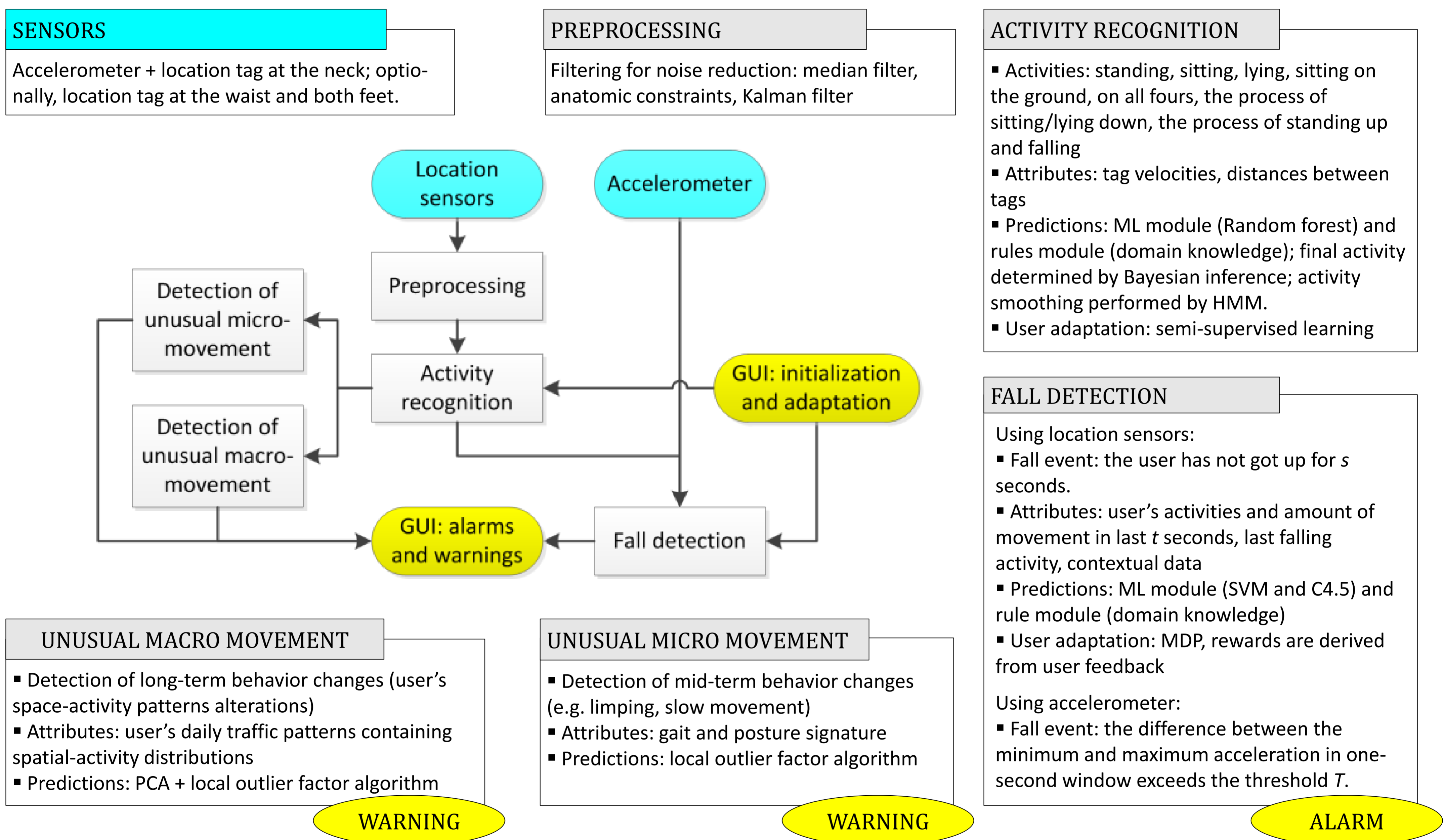
- Fewer than two persons of working age for each person aged 65+ in EU by 2050
- Need of technical solutions that enable the elderly to live independently longer with minimal support from the working-age population

Our solution

Confidence, a **care system for the elderly** that is able to detect:

- Abnormal events such as **falls** (short-term)
- **Unexpected behavior** that may be related to a health problem (mid- and long-term behavior changes)

System architecture



Demo

	ALARM RAISED?		
	Inertial	Location	Joint Decision
FALL SCENARIOS			
Tripping	Yes	Yes	Yes
Falling slowly	No	Yes	Yes
Tripping + standing up quickly	Yes	No	Yes
NON-FALL SCENARIOS			
Lying down quickly	Yes	No	No
Searching under the table	No	Yes/No	No