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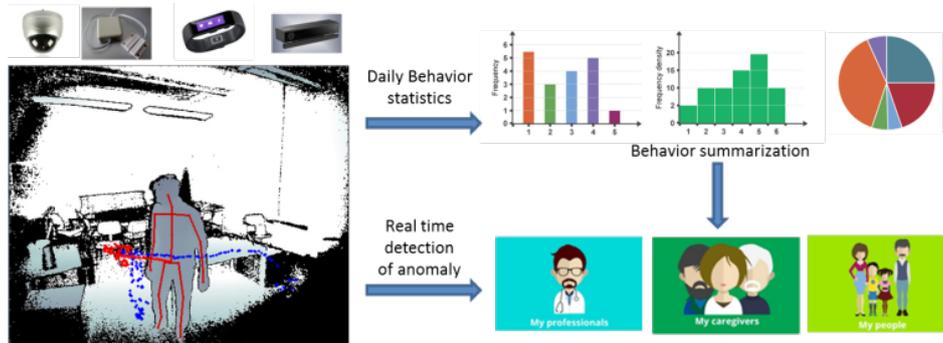
# MULTIMEDIA & ARTIFICIAL INTELLIGENCE

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## Computer vision and machine intelligence to the service of societal needs

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Recent advances in the areas of computer vision, artificial intelligence and data analysis are giving rise to a new era in human-machine interaction. A computer (or a machine, in general) should not be seen as a passive box that just processes information but, instead, today it can – and, actually, should be seen as a device that can act as a companion, an active tutor or a health coach that can interpret our personalized needs, emotions and activities. Coupling human-machine interaction with ambient assisted living and visual computing is now escaping the tight limits of research laboratories and university departments and real products see their way into the market. We discuss about our current research in the use of computer vision and latest advances in machine intelligence to the benefit of societal needs and, in particular, in the areas of education and health. We will present the pipeline and methods used in our research, as well as the bottlenecks met, both from a technical point of view and a functional one. Subsequently, we will give an overview of computer vision techniques and ambient assisted living technologies utilized for human emotion understanding and activity recognition. Results, within the frame of our current work, with the use of ANNs for learning, in an unsupervised manner, personalized patterns in emotion and/or activity understanding, user profiling and system adaptation will be shown and discussed during the talk.



### Biography

Stylios Asteriadis is an Assistant Professor at University of Maastricht, Netherlands. He completed his PhD at School of Electrical and Computer Eng. of National Technical University of Athens. His research interests lie in the areas of Affective Computing, Visual Computing, Machine Learning, and Human Activity Recognition. He has published more than 40 papers in reputed journals. Currently, he is the Principal Investigator of University of Maastricht in two H2020 collaborative projects (H2020-PHC-2015 Health project 'ICT4Life- Advanced ICT systems and services for integrated care' and H2020 ICT-20-2015 'MaTHiSiS- Technologies for better human learning and teaching'). He is a Reviewer and program committee member of several journals and conferences.

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