

CAT-SL: An open source global approach for Sign Language teaching

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Abstract: According to the World Health Organization up to 5 out of every 1000 children are born deaf or hard of hearing. Obviously, these children must be educated by teachers adequately trained in Sign Languages, the native languages of the Deaf, so that they are able to communicate and to develop linguistically. However, it is hard for Higher Education Institutes – and other education levels as well- to find and employ as tutors experts in Sign Language. Computer Assisted Teaching in Sign Language (CAT-SL) is a three-year EU funded project that aims to fulfill this gap and develop an innovative and affordable system for interactive SL teaching for students in Special Education/Pedagogical departments and primary school education. CAT-SL project will develop a curricula and guides for teaching SL using the CAT-SL system for at least two multilingual courses, in partners countries - Greece, Cyprus, Portugal and Netherlands- to support the social inclusion of the deaf children. The CAT-SL system is based on computer-vision, machine-learning, linguistic technology, and avatars developed by all the involved partners in several ongoing or recently completed national and EU-funded projects. The project differentiates from other similar efforts for SL analysis and systems due to the the adoption of a more global approach, necessary to create a system that could be extended to more international Sign Languages.