

Reducing the Need of Labelled Data in Machine Learning

During this talk I will expose the approaches that we have developed to reduce the need for labelled data for several domains of machine learning applications and data types. These will range from histopathological image analysis (homogeneous imagery) to remote sensing (heterogeneous imagery) and surgical video analysis; and from images to time-series. I will present several domain invariant approaches that we have developed to overcome difficulties in transferring knowledge between domains, approaches to reduce the annotation burden associated with deep learning, and to reduce deep learning model sizes.