

CONTRASTIVE SELF-SUPERVISED LEARNING AND SOME APPLICATIONS TO VISUAL DATA UNDERSTANDING

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Multi-view and multimodal self-supervised learning is crucial in extracting meaningful semantic features from data in many tasks involving visual data understanding. This talk will present and discuss several multimodal proposals for some visual analysis problems. They include a new contrastive method allowing to obtain robust visual feature representations. It combines multi-view/multimodal contrastive learning and clustering by optimizing the mutual information between probabilities assigned to semantic feature clusters, while differentiating them from non-corresponding clusters. The application of this self-supervised learning will be tested across several downstream tasks.