

# Using Multi-View Learning for Alzheimer disease prognosis

## Abstraction

Alzheimer disease (AD) is a common reason for madness. It causes a memory loss and directly affected in daily life. The aim of this study is to produce a predictor to recognize AD in the earlier stages to limit brain region damaging, while, clinical signs are not completely revealed.

Recently combining the results of various views of a problem, i.e. Multi-View Learning is an efficient approach in machine learning. So, regarding that Hippocampus is a significant part of the brain in AD detection, we have to extract shape features besides textural features for early prognosis. To detect the area of Hippocampus, active contour is employed. Then shape features are extracted and this region is passed to a famous deep network, i.e. Inception to extract textural features. Finally, PCA is used for feature reduction and SVM perform the classification task. The proposed method resulted in 98.96% of accuracy that is better than the rival methods in this field.

**Keywords:** Alzheimer's disease, Multi-View Learning, deep learning, active contour