CEA-LSEA: Out-of-Distribution Detection in DNN Latent Space Uncertainty

Description

CEA-LSEA package for Out-of-Distribution (OoD) detection in DNN latent space.

The package currently supports the following DNN architectures for semantic segmentation:

- Deeplabv3+
- Probabilistic U-Net

In both cases, the DNN were slightly modified to capture *epistemic* uncertainty using the Monte-Carlo Dropout.

approach, and adding a DropBlock2D layer.

To train the OoD detector, we assume access to In-Distribution (InD) and OoD Samples.

Requirements

ToDo!

Installation

ToDo!

Usage

For detailed usage procedure, check this document

Publications and Technical Reports

For more technical and implementation details, we refer the user to the following technical reports and publications:

Technical Reports:

- EC3-FA06 Run-Time Monitoring
- EC3-FA18 Run-Time Monitoring

Publications

- Out-of-Distribution Detection using Deep Neural Network Latent Space

License