

Spectral analysis of latent representations

Presenter: Justin Shenk

Designing neural network architectures typically requires a user experienced with machine learning. A metric layer saturation was developed to guide machine learning engineers with fine-tuning deep neural networks during training:

Intrinsic dimensionality is estimated by eigendecomposition of layer inputs

Layer saturation is a signal for intrinsic dimensionality and over-parameterization.

Layer saturation can be quickly computed during training and integrated with deep learning frameworks.