Loss Landscape Visualization

Report for the Seminar on Optimization and Neural Architecture Search

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Abstract

Neural networks have emerged as powerful function approximators with large parameter sets. These parameters are optimized according to a loss function. Many assumptions have been made about the shape of the resulting loss landscape. However, only recently qualitative and empricial studies have been conducted. Here, we give an overview for recent advances of this field. We will explore different methods in detail and discuss their results and impact.

Introduction

Background

Methods

Linear Interpolation

Filter Normalization

[Xing et al., 2018]

Results

Conclusions

Literatur

[Xing et al., 2018] Xing, C., Arpit, D., Tsirigotis, C., and Bengio, Y. (2018). A walk with sgd. *arXiv preprint arXiv:1802.08770*.