

Regularization of linear machine learning problems

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In this paper, the theoretical knowledge of inverse problems and ill-posed problems is applied to linear neural networks (LNN) in combination with machine learning methods to retrain neural networks using the most popular regularization methods (including L1, L2, Dropout, etc.) [1]. A brief review of regularization methods for system of linear algebraic equations (SLAE) including gradient methods and regularization methods is given [2]. The justification of some approaches to solving the linear machine learning problem (LMLP) using regularization is shown[3], including the most important issues of matching the input data specification error with the regularization parameters (reducing the effect of overtraining) and the use of a priors and information (reducing the system size and accelerating convergence).

REFERENCES

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