Your Title

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January 25, 2022

Abstract

The text of your abstract. 200 or fewer words.

Keywords: 3 to 6 keywords

1 Introduction

Describe the dataset and and define the problem. Do not explain in detail the basics of ANNs as we did in the introductory lecture.

(?)

Hope et al. (2017); Chollet (2018)

Figure 1: Caption

2 Methods

Describe the architecture of your net, the training and validation process, regularisation methods you used, ...

Beispiel des von uns gewünschten Pseudo-Code Layouts:

Algorithm 1 Major Iteration: Bound-Constraint Lagrangian

Require: initial weights $\boldsymbol{w}_0 \in \mathbb{R}^K$, multipliers λ^0, inital value penality parameter $\gamma_0 > 0$ and given total convergence tolerances for η_* and ω_*

for k = 1,2,. . . **do**

Using SQP finding an approximate solution for w_0 of the subproblem

$$\left\|\boldsymbol{w}_k - P\left(\boldsymbol{w}_k - \nabla_{\boldsymbol{w}}\mathcal{L}_A\left(\boldsymbol{w}_k, \lambda^k; \gamma_k\right), l, u\right)\right\| \leq \omega_k$$

if $\|c\left(\boldsymbol{w}_k\right)\| \leq \eta_k$ **then**

testing for convergence of given subproblem

if $\|c\left(\boldsymbol{w}_*\right)\| \leq \eta_* \wedge q_k(\boldsymbol{w}) \leq \omega_*$ **then**

stop approximate solution of w_k found

end if solution holds

Update the underlying multipliers

$\boldsymbol{\lambda}^{k+1} = \boldsymbol{\lambda}^k - \gamma_k c\left(x_k\right)$

$\gamma_{k+1} = \gamma_k$

else

If no valid solution was found and increase the penalties

$\boldsymbol{\lambda}^{k+1} = \boldsymbol{\lambda}^k$

$\gamma_{k+1} = 100\gamma_k$

end if

end for

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3 Results

Describe the results of your analysis.

Beispiel des gewünschten Tabellen Layouts:

Table 1: Calculated weight for M1 (w_1) for different given variance ratios

τ_1^2	Mean	Std.Error
0	0.069	0.059
0.25	0.205	0.096
0.50	0.499	0.125
0.75	0.795	0.097
1	0.933	0.061

4 Conclusion

Discuss your results.

A Appendix

A.1 ..

References

Chollet, F. (2018). *Deep Learning with Python*. Manning Publications Co, Shelter Island, New York.

Hope, T., Resheff, Y. S., and Lieder, I. (2017). Learning TensorFlow.