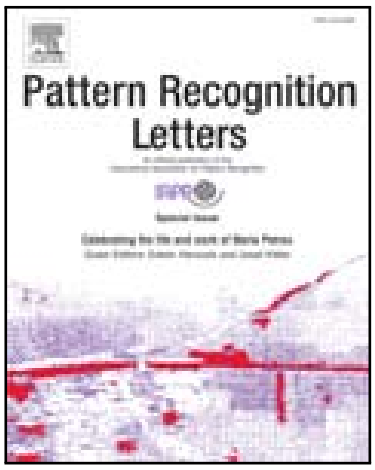
Accepted Manuscript



Variational Closed-Form Deep Neural Net Inference

Melih Kandemir

PII: S0167-8655(18)30286-1
DOI: 10.1016/j.patrec.2018.07.001
Reference: PATREC 7227

To appear in: *Pattern Recognition Letters*

Received date: 19 September 2017
Revised date: 20 February 2018
Accepted date: 1 July 2018

Please cite this article as: Melih Kandemir, Variational Closed-Form Deep Neural Net Inference, *Pattern Recognition Letters* (2018), doi: 10.1016/j.patrec.2018.07.001

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- A novel Bayesian neural net construction allowing closed-form variational inference.
- Closed-form updates are made tractable by decomposing ReLU into two components.
- The resulting inference scheme fast convergence, compatible for online learning.
- State-of-the-art learning curve when applied to Bayesian active learning.
- Outperforms deterministic neural nets in scarce data regimes.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/6940125

Download Persian Version:

https://daneshyari.com/article/6940125

Daneshyari.com