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Deep Learning Algorithms for Control

Yuan Gao

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Abstract

One sub-field of machine learning called deep learning gained a lot of attention recently as a method attempting to model high-level abstractions by using model architectures composed by multiple non-linear layers. (for example [KSH12]). Several architectures of deep learning networks like deep belief network [HOT06], deep Boltzman machine [SH09], convolutional neural network [KSH12] and deep de-noising auto-encoder [VLL$^+$10] have shown its advantages in specific areas. One interesting example is convolutional neural network invented by Krizhevsky in 2012, which outperformed all the traditional feature-based machine learning techniques

Computing Reviews (1998) Categories and Subject Descriptors:
A.0 Example Category
C.0.0 Another Example

General Terms:

Additional Key Words and Phrases:

Acknowledgements

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Theorem 4.1 *This is a sample sentence that should look like normal text, and this is another:*

$$y = x + 3$$

Proof. This is a sample sentence. □

References

[HOT06] Geoffrey E. Hinton, Simon Osindero, and Yee Whye Teh. A fast learning algorithm for deep belief nets. *Neural computation*, 18:1527–54, 2006.

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[VLL+10] Pascal Vincent, Hugo Larochelle, Isabelle Lajoie, Yoshua Bengio, and Pierre-Antoine Manzagol. Stacked Denoising Autoencoders: Learning Useful Representations in a Deep Network with a Local Denoising Criterion. *Journal of Machine Learning Research*, 11:3371–3408, 2010.