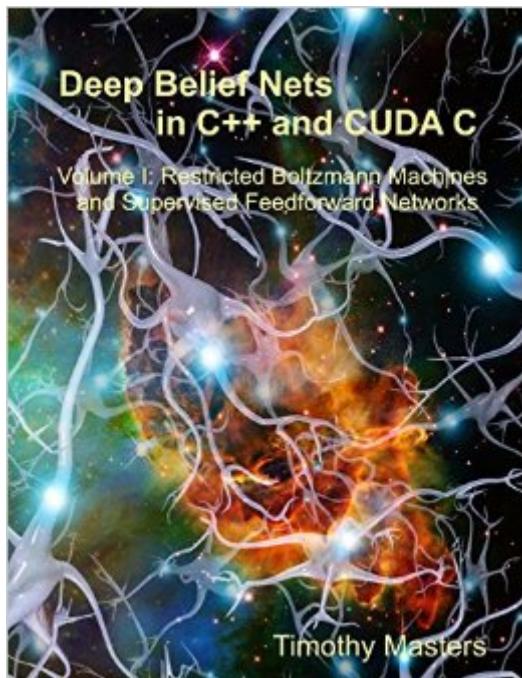


The book was found

# Deep Belief Nets In C++ And CUDA C: Volume 1: Restricted Boltzmann Machines And Supervised Feedforward Networks



## Synopsis

News flash... If anyone would prefer reading these books in Korean, Volume 1 is now available from a South Korean publisher, with Volumes 2 and 3 available soon:

<http://www.acornpub.co.kr/book/dbn-cuda-vol1> Deep belief nets are one of the most exciting recent developments in artificial intelligence. The structure of these elegant models is much closer to that of human brains than traditional neural networks; they have a "thought process"™ that is capable of learning abstract concepts built from simpler primitives. A typical deep belief net can learn to recognize complex patterns by optimizing millions of parameters, yet this model can still be resistant to overfitting. This book presents the essential building blocks of the most common forms of deep belief nets. At each step the text provides intuitive motivation, a summary of the most important equations relevant to the topic, and concludes with highly commented code for threaded computation on modern CPUs as well as massive parallel processing on computers with CUDA-capable video display cards. Source code for all routines presented in the book, and the DEEP program which implements these algorithms, are available for free download from the author's™ website. NOTE... The source code available for free download includes all of the code listed in the book, along with some libraries of related routines. Complete code for the DEEP program is not included; this code is enormous, as it includes many Windows-only interface routines, screen display code, and so forth. Users who wish to write their own DBN programs are responsible for implementing their own hardware/OS interface, while using my supplied code for the mathematical calculations.

## Book Information

Series: Deep Belief Nets in C++ and CUDA C

Paperback: 244 pages

Publisher: CreateSpace Independent Publishing Platform; 1 edition (February 11, 2015)

Language: English

ISBN-10: 1507751478

ISBN-13: 978-1507751473

Product Dimensions: 7.4 x 0.6 x 9.7 inches

Shipping Weight: 1.2 pounds (View shipping rates and policies)

Average Customer Review: 4.2 out of 5 starsÂ See all reviewsÂ (5 customer reviews)

Best Sellers Rank: #194,686 in Books (See Top 100 in Books) #36 inÂ Books > Computers & Technology > Computer Science > AI & Machine Learning > Neural Networks

## Customer Reviews

First, I must disclose that I have known Dr. Masters for 20 years and have collaborated with him on various projects including a book we co-authored.(Statistically Sound Machine Learning for Algorithmic Trading of Financial Instruments). In addition he was a crucial adviser on my book Evidence Based Technical Analysis. He is also a friend. With that said, Dr. Masters is a person of integrity, humility, intellectual honesty and competence. When he became interested in Deep Belief Networks, also known as Deep Learning Nets, I took that as a signal that this was a truly important development in the field of machine learning and I'd better get my admittedly slow human intellect exposed to DBNs. allows you to look inside the book so I won't reiterate the table of contents or outline what the book contains. Interested readers can do that themselves. The key point for interested readers is this: deep belief networks represent an important advance in machine learning due to their ability to autonomously synthesize features. Feature engineering, the creating of candidate variables from raw data, is the key bottleneck in the application of machine learning to any field. If feature engineering is done well, even a relatively weak model, such as a multiple linear regression can produce a useful predictive model. If done poorly, even the most powerful machine learning methods will fail. Thus feature engineering is the "without-which-not" of success. Of particular importance is that the feature engineering conducted by a DBN is performed in an unsupervised fashion ( no reference to the target variable).

[Download to continue reading...](#)

Deep Belief Nets in C++ and CUDA C: Volume 1: Restricted Boltzmann Machines and Supervised Feedforward Networks Deep Belief Nets in C++ and CUDA C: Volume III: Convolutional Nets (Volume 3) Neural Smithing: Supervised Learning in Feedforward Artificial Neural Networks (MIT Press) Deep Learning: Natural Language Processing in Python with Recursive Neural Networks: Recursive Neural (Tensor) Networks in Theano (Deep Learning and Natural Language Processing Book 3) Deep Learning for Business with R: A Very Gentle Introduction to Business Analytics Using Deep Neural Networks Deep Learning Step by Step with Python: A Very Gentle Introduction to Deep Neural Networks for Practical Data Science Entropy Methods for the Boltzmann Equation: Lectures from a Special Semester at the Centre Émile Borel, Institut H. Poincaré, Paris, 2001 (Lecture Notes in Mathematics) A Restricted Country What Do Pulleys and Gears Do? (What Do Simple Machines Do?) (What Do Simple Machines Do?) (What Do Simple Machines Do?) Artificial Intelligence for Humans, Volume 3: Deep Learning and Neural Networks CUDA by Example: An Introduction to General-Purpose GPU Programming CUDA Programming: A Developer's Guide to

Parallel Computing with GPUs (Applications of Gpu Computing) CUDA Handbook: A Comprehensive Guide to GPU Programming, The CUDA for Engineers: An Introduction to High-Performance Parallel Computing Deep Learning: Recurrent Neural Networks in Python: LSTM, GRU, and more RNN machine learning architectures in Python and Theano (Machine Learning in Python) Unsupervised Deep Learning in Python: Master Data Science and Machine Learning with Modern Neural Networks written in Python and Theano (Machine Learning in Python) Convolutional Neural Networks in Python: Master Data Science and Machine Learning with Modern Deep Learning in Python, Theano, and TensorFlow (Machine Learning in Python) Deep Learning in Python: Master Data Science and Machine Learning with Modern Neural Networks written in Python, Theano, and TensorFlow (Machine Learning in Python) Deep Learning Neural Networks: Design and Case Studies Deep Learning: Natural Language Processing in Python with Word2Vec: Word2Vec and Word Embeddings in Python and Theano (Deep Learning and Natural Language Processing Book 1)

[Dmca](#)