Abstract

The aim of this paper is to layout deep investment techniques in financial markets using deep learning models. Financial prediction problems usually involve huge variety of data-sets with complex data interactions which makes it difficult to design an economic model. Applying deep learning models to such problems can exploit potentially non-linear patterns in data. In this paper author introduces deep learning hierarchical decision models for prediction analysis and better decision making for financial domain problem set such as pricing securities, risk factor analysis and portfolio selection. The Section 3 includes architecture as well as detail on training a financial domain deep learning neural network. It further lays out different models such as LSTM, auto-encoding, smart indexing, credit risk analysis model for solving the complex data interactions. The experiments along with their results show how these models can be useful in deep investments for financial domain problems.

2. Deep Learning for Event-Driven Stock Prediction, by Xiao Ding, Yue Zhang, Ting Liu, Junwen Duan, Harbin Institute of Technology, China, Singapore University of Technology and Design


7. Rectified Linear Units Improve Restricted Boltzmann Machines, By Vinod Nair and Geoffrey E. Hinton


10. Long Short-Term Memory Recurrent Neural Network Architectures for Large Scale Acoustic Modeling, Hasım Sak, Andrew Senior, Francoise Beaufays, Google


14. Learning Deep Feature Representations with Domain Guided Dropout for Person Re-identification By Tong Xiao, Hongsheng Li, Wanli Ouyang, Xiaogang Wang

Index Terms

Computer Science

Information Sciences

Keywords

Machine learning, deep learning, artificial intelligence, neural network, credit risk, stock market