Search for Academic Sources related to my Research Question

Joris Peters (s4001109) – 3rd of March 2022

Research question

How may mixed time-series data be decomposed and recomposed in novel and meaningful ways using conceptors?

Databases

SmartCat, WoS, Scopus, ACM

Known items

Jaeger, H. (2017). Controlling Recurrent Neural Networks by Conceptors. *ArXiv:1403.3369 [Cs]*. http://arxiv.org/abs/1403.3369 (The paper by my supervisor that presents conceptors in great detail and did so for the first time) Mitchell, M. (2021). Abstraction and Analogy-Making in Artificial Intelligence. *Annals of the New York Academy of Sciences*, *1505*(1), 79–101. https://doi.org/10.1111/nyas.14619 (review of computational methods for creative analogies) Ha, D., & Eck, D. (2017). A Neural Representation of Sketch Drawings. *ArXiv:1704.03477 [Cs, Stat]*. http://arxiv.org/abs/1704.03477 (Work that I try to improve on) Lukoševičius, M. (2012). A Practical Guide to Applying Echo State Networks. In G. Montavon, G. B. Orr, & K.-R. Müller (Eds.), *Neural Networks: Tricks of the Trade* (Vol. 7700, pp. 659–686). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-35289-8_36 (Good technical guide)

Search terms (use thesaurus)

Conceptors Conceptor Computational creativity Time-series decomposition Recurrent neural networks RNN Omniglot

Analogy-making
Analogies
Reservoir
ESN
Echo state network
Generalization
K-means
Clustering
Digit

Search string

Basic (217 WoS)
Neural Network AND time-series AND Segmentation

Advanced (726 WoS**)**
TS=((RNN OR "Recurrent Neural Network" OR Reservoir* OR ESN OR "Echo-state Network" OR Conceptors OR Conceptor) AND (decomposition OR segmentation OR recomposition OR generalization OR Analogies OR "Computational Creativity") AND (Signal OR "Time-series")

Sources found

First result WoS
DeePr-ESN: A deep projection-encoding echo-state network
By: Ma, Qianli; Shen, Lifeng; Cottrell, Garrison W.
INFORMATION SCIENCES Volume: 511 Pages: 152-171 Published: FEB 2020

Sorted by times cited (WoS)
Deep learning and its applications to machine health monitoring
By: Zhao, Rui; Yan Ruqiang; Chen, Zhenghua; Mao, Kezhi; Wanh, Peng; Gao, Robert X.
MECHANICAL SYSTEMS AND SIGNAL PROCESSING Volume: 115 Pages: 213-237 Published: JAN 2019

Cited references by Herber Jaeger sorted by times cited (Scopus)
Deep Learning in neural networks: An overview
NEURAL NETWORKS Volume: 61 Pages: 85-117 Published: JAN 2015

Search by the Author Herbert Jaeger by Date and choosing the paper that seemed most relevant to my research topic (on Scopus, since the author was not found on WoS)
Using conceptors to manage neural long-term memories for temporal patterns
JOURNAL OF MACHINE LEARNING RESEARCH Volume: 18 Pages: 387-429 Published: MAR 2017

Filter on review (WoS)

Hybrid structures in time series modeling and forecasting: A reviewBy: Hepbasli, Arif; Alsuhaibani, Zeyad
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE Volume: 86 Pages: 88-106 Published: NOV 2019