Title (en)

A SPIKING NEURAL NETWORK FOR PROBABILISTIC COMPUTATION

Title (de)

GEPULSTES NEURONALES NETZWERK ZUR PROBABILISTISCHEN BERECHNUNG

Title (fr)

RÉSEAU NEURONAL À IMPULSIONS POUR CALCUL PROBABILISTE

Publication

EP 3908982 A1 20211117 (EN)

Application

EP 19782857 A 20190920

Priority

- US 201962790296 P 20190109
- US 2019052275 W 20190920

Abstract (en)

[origin: WO2020146016A1] Described is a system for computing conditional probabilities of random variables for Bayesian inference. The system implements a spiking neural network of neurons to compute the conditional probability of two random variables X and Y. The spiking neural network includes an increment path for a synaptic weight that is proportional to a product of the synaptic weight and a probability of X, a decrement path for the synaptic weight that is proportional to a probability of X, Y, and delay and spike timing dependent plasticity (STDP) parameters such that the synaptic weight increases and decreases with the same magnitude for a single firing event.

IPC 8 full level

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CPC (source: EP)

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Designated extension state (EPC)

BA ME

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