

Publication Title	DOI	Url	paper_type	hardware_or_simulator	Architecture_Type	code_availability	QA1. Purpose & Context	QA2. Methodological Quality	QA3. Data & Tools Transparency
Optics Express	10.48550/arXiv.2304.11857	http://arxiv.org/abs/2304.11857	Architecture proposal	GPU \CPU CMOS energy model	Spiking Encoder-Decoder Network	Promised.	2	2	1
IEEE Access	10.3390/biomimetics9100646	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85207676241&doi=10.3390%2Fbiomimetics9100646&partnerID=40&md5=95d33efc0ee7f21bb0c689694d93de73	Architecture proposal	GPU \CPU	Convolutional Spiking Neural Network (Conv-SNN)	Not Available	2	1	1
Neurocomputing	10.1007/s00366-024-01967-3		Architecture proposal	Xylo-Av2 KerasSpiking GPU \CPU	Hybrid Recurrent Spiking Neural Network (SNN)	Not Available	2	2	2

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	10.1038/s41598-024-60996-6	https://www.nature.com/articles/s41598-024-60996-6	Architecture proposal Novel Encoding Mechanism	MATLAB simulation GPU \CPU	Reservoir-based SNN	Available	2	1	1
	10.1109/ACCESS.2022.3209671		Novel Encoding Mechanism	GPU \CPU	DTS-SNN (Dynamic Time-Surfaces Spiking Neural Network)	Available	2	2	1
	10.48550/arXiv.2506.01968	http://arxiv.org/abs/2506.01968	Conversion framework	GPU \CPU	Converted deep CNN-based SNN	Not Available	2	2	1

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Nature Communications	10.1145/3517343.3517372	https://doi.org/10.1145/3517343.3517372	Novel Algorithmic Framework	GPU \CPU Loihi	Hybrid Guided Variational Autoencoder with SNN encoder	Not Available	2	2	1
Nature Communications	10.3389/fnins.2022.949142	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85137892057&doi=10.3389%2Ffnins.2022.949142&partnerID=40&md5;=1d34793667e99c14b7268a2cc2d1602d	Architecture proposal	GPU \CPU	Hybrid ANN-SNN (Convolutional SNN with ANN-based top-down attention)	Available	2	1	2

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npj Unconventional Computing	10.1145/3581783.3612147	http://arxiv.org/abs/2310.02361	Architecture proposal	Gazebo simulator+AA19 GPU \CPU	Spiking Actor–Critic Architecture	Not Available	2	2	1
Nature Communications	10.3389/fnins.2023.1174760	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163610018&doi=10.3389%2Ffnins.2023.1174760&partnerID=40&md5=53c52d2393d8869401e9bfcc8cc1524c	Feasibility study	GPU \CPU	SNN	Not Available	1	1	1
Neuromorphic Computing and Engineering	10.1364/OE.497218	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85171286173&doi=10.1364%2FOE.497218&partnerID=40&md5=d082bfb9c3b9bf1049e1e70bccf94a14	Architecture proposal	GPU \CPU	Deep convolutional residual spiking neural network (DCRSNN)	Not Available	1	1	1

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Frontiers in Neuroscience	10.3390/electronics12173565	https://www.scopus.com/inward/record.uri?eid=2-s2.0-85170580778&doi=10.3390%2Felectronics12173565&partnerID=40&md5=beecd9f2e651ee9ddb9cb975c3a8d73e	Architecture proposal	GPU \CPU CMOS energy model	Hybrid spiking fully convolutional neural network (SFCNN)	Not Available	1	1	2
	10.1088/2634-4386/ade183	https://www.scopus.com/inward/record.uri?eid=2-s2.0-105009129892&doi=10.1088%2F2634-4386%2Fade183&partnerID=40&md5=b67fe63ab11494a23713296aaed1377a	Novel Algorithmic Framework	GPU \CPU	Converted spiking neural network (LIF-based)	Available	2	2	1
Complexity	10.48550/arXiv.2307.14464		Architecture proposal	GPU \CPU	U-Net-based Spiking Neural Network	Not Available	1	1	1
Biomimetics	10.48550/arXiv.2203.16117		Architecture proposal	GPU \CPU	Hybrid CNN-SNN	Not Available	2	2	1

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IEEE Access	10.48550/arXiv.2503.11206	http://arxiv.org/abs/2503.11206	Comparative Benchmark Study	GPU \CPU	Pure SNN classifier with external spike encoder	Not Available	1	1	1
	10.1038/s44335-024-00002-4		Novel Algorithmic Framework	Loihi GPU \CPU	Recurrent Spiking Neural Network (RSNN)	Not Available	2	2	1
	10.48550/arXiv.2407.08362	http://arxiv.org/abs/2407.08362	Architecture proposal	GPU \CPU	Ensemble of Spiking Recurrent Neural Network (SRNN)	Available	2	2	1

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	10.48550/arXiv.2407.05310	http://arxiv.org/abs/2407.05310	Architecture proposal	GPU \CPU	Quantized Ternary Spiking Neural Network (QT-SNN)	Not Available	2	2	1