

American sign language character recognition using convolutional neural networks

Abdullah, Atesam; Ali, Nisar; Ali, Raja Hashim; **Abideen, Zain Ul**; Ijaz, Ali Zeeshan; Bais, Abdul 2023 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE) : Regina, SK, Canada, 24-27 September 2023 / p. 165-169
<https://doi.org/10.1109/CCECE58730.2023.10288799>

APPRAISER : DNN fault resilience analysis employing approximation errors

Taheri, Mahdi; Ahmadilivani, Mohammad Hasan; Jenihhin, Maksim; Daneshtalab, Masoud; Raik, Jaan 2023 26th International Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS) 2023 / p. 124–127 : ill
<https://ddec2023.taltech.ee/> <https://doi.org/10.1109/DDECS57882.2023.10139468>

Artificial intelligence yesterday, today and tomorrow

Jaakkola, Hannu; **Henno, Jaak**; Mäkelä, Jukka; Thalheim, Bernhard 2019 42nd International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO) : May 20 – 24, 2019, Opatija, Croatia : proceedings 2019 / p. 860 - 867 : ill <https://doi.org/10.23919/MIPRO.2019.8756913>

Audiovisual emotion recognition in wild

Avots, Egils; Sapinski, Tomasz; **Bachmann, Maie**; Kaminska, Dorota Machine Vision and Applications 2019 / p. 975–985 : ill
<https://doi.org/10.1007/s00138-018-0960-9> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Automated training set size reduction for detection of small and thin objects

Pihlak, Rene; Riid, Andri 12th International Conference on Information Systems and Advanced Technologies "ICISAT 2022" : Intelligent Information, Data Science and Decision Support System 2023 / p. 423-433 https://doi.org/10.1007/978-3-031-25344-7_39
[Conference Proceedings at Scopus](#) [Article at Scopus](#)

Charge Diagnostics and State Estimation of Battery Energy Storage Systems Through Transformer Models

Zequera, Rolando Antonio Gilbert; Rassölkin, Anton; Vaimann, Toomas; Kallaste, Ants IEEE Access 2025 / p. 17733–17744 : ill <https://doi.org/10.1109/ACCESS.2025.3532858>

Deep Learning Based Segmentation of Luria's Alternating Series Test to Support Diagnostics of Parkinson's Disease

Valla, Elli; Laur, Henry; Nömm, Sven; Medijainen, Kadri; Taba, Pille; Toomela, Aaro 2023 International Conference on Machine Learning and Applications (ICMLA) 2023 / p. 1066-1071 : ill <https://doi.org/10.1109/ICMLA58977.2023.00158>

Deep Learning methodology for charging management applications in battery cells based on Neural Networks

Zequera, Rolando Antonio Gilbert; Rjabtsikov, Viktor; Rassölkin, Anton; Vaimann, Toomas; Kallaste, Ants IEEE Transactions on Intelligent Vehicles 2025 / p. 668-682 <https://doi.org/10.1109/TIV.2024.3417216>

Deep learning-based detection of cyberattacks in software-defined networks

Mirsadeghi, Seyed Mohammad Hadi; Bahsi, Hayretidin; Inbouli, Wissem Digital forensics and cyber crime : 13th EAI international conference, ICDF2C 2022, Boston, MA, November 16-18, 2022 : proceedings 2023 / p. 341-354
https://doi.org/10.1007/978-3-031-36574-4_20

Deep magnitude management of clinical code embeddings to predict unplanned hospital readmissions

Bignoumba, Nzamba; Bertl, Markus; Mellouli, Nedra; **Ben Yahia, Sadok** Research Square 2024 / 32 p. : ill
<https://doi.org/10.21203/rs.3.rs-4705729/v1>

Deep reinforcement learning-based digital twin for droplet microfluidics control

Gyimah, Nafisat; Scheler, Ott; Rang, Toomas; Pardy, Tamas Physics of Fluids 2023 / art. 082020 <https://doi.org/10.1063/5.0159981>
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Detecting Simpson's paradox : a machine learning perspective

Sharma, Rahul; Garayev, Huseyn; **Kaushik, Minakshi; Arakkal Peious, Sijo**; Tiwari, Praug; **Draheim, Dirk** Database and Expert Systems Applications : 33rd International Conference, DEXA 2022, Vienna, Austria, August 22-24, 2022 : proceedings. Part I 2022 / p. 323-335 : ill https://doi.org/10.1007/978-3-031-12423-5_25 [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

An efficient FPGA-based architecture for contractive autoencoders

Kerner, Madis; Tammemäe, Kalle; Raik, Jaan; Hollstein, Thomas 2020 IEEE 28th Annual International Symposium on Field-Programmable Custom Computing Machines (FCCM), 3 – 6 May 2020, Fayetteville, Arkansas : proceedings 2020 / p. 230–230
<https://doi.org/10.1109/FCCM48280.2020.00062>

Enhancing PV hosting capacity and mitigating congestion in distribution networks with deep learning based PV forecasting and battery management

Shabbir, Noman; Kütt, Lauri; Astapov, Victor; Daniel, Kamran; Jawad, Muhammad; **Husev, Oleksandr; Rosin, Argo**; Martins, Joao Applied energy 2024 / art. 123770 <https://doi.org/10.1016/j.apenergy.2024.123770>

Environmentally adaptive fish or no-fish classification for river video fish counters using high-performance desktop and

embedded hardware

Soom, Jürgen; Pattanaik, Vishwajeet; Leier, Mairo; Tuhtan, Jeffrey Andrew Ecological Informatics 2022 / art. 101817, 14 p. : ill
<https://doi.org/10.1016/j.ecoinf.2022.101817> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Evaluation of deep learning-based depression detection using medical claims data

Bertl, Markus; Bignoumba, Nzamba; Ross, Peeter; Ben Yahia, Sadok; Draheim, Dirk Artificial intelligence in medicine 2024 / art. 102745, 16 p. : ill <https://doi.org/10.1016/j.artmed.2023.102745>

Evaluation of deep learning-based depression detection using medical claims data : preprint

Bertl, Markus; Bignoumba, Nzamba; Ross, Peeter; Ben Yahia, Sadok; Draheim, Dirk SSRN 2023 / p. 1-34 : ill
<https://doi.org/10.2139/ssrn.4478987>

Exploring deep learning based object detection architectur

Saddique, Muhammad Saddique; Raza, Ahsan; **Abideen, Zain Ul**; Khan, Shah Nawaz 2020 17th International Bhurban Conference on Applied Sciences and Technology (IBCAST), Islamabad, Pakistan, 2020 2020 / p. 255-259
<https://doi.org/10.1109/IBCAST47879.2020.9044558>

Generative adversarial networks as a data augmentation tool for CNN-based Parkinson's disease diagnostics

Dzotsenidze, Erik; Valla, Elli; Nömm, Sven; Medijainen, Kadri; Taba, Pille; Toomela, Aaro IFAC-Papers OnLine 2022 / p. 108-113 : ill <https://doi.org/10.1016/j.ifacol.2022.10.240> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Improving transparency and explainability of deep learning based IoT botnet detection using explainable artificial intelligence (XAI)

Kalakoti, Rajesh; Nömm, Sven; Bahsi, Hayretudin 22nd IEEE International Conference on Machine Learning and Applications : ICMLA 2023 : 15-17 December 2023, Jacksonville Riverfront, Florida : proceedings (2023) 2023 / p. 595 - 601
<https://doi.org/10.1109/ICMLA58977.2023.00088>

Learning from few cyber-attacks : addressing the class imbalance problem in machine learning-based intrusion detection in software-defined networking

Mirsadeghi, Seyed Mohammad Hadi; Bahsi, Hayretudin; Vaarandi, Risto; Inoubli, Wissem IEEE Access 2023 / p. 140428 - 140442 <https://doi.org/10.1109/ACCESS.2023.3341755> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Lidar-camera semi-supervised learning for semantic segmentation

Caltagirone, Luka; **Bellone, Mauro;** Svensson, Lennart; Wahde, Mattias; **Sell, Raivo** Sensors 2021 / art. 4813
<https://doi.org/10.3390/s21144813> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A light-weight CNN model for efficient Parkinsons disease diagnostics

Wang, Xuechao; Huang, Junqing; Chatzakou, Marianna; Medijainen, Kadri; Taba, Pille; Toomela, Aaro; **Nömm, Sven;** Ruzhansky, Michael 36th IEEE International Symposium on Computer-Based Medical Systems, CBMS 2023, Aquila, 22-24 June 2023 2023 / p. 616-621 <https://doi.org/10.1109/CBMS58004.2023.00289> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Machine learning and deep learning techniques for residential load forecasting : a comparative analysis

Shabbir, Noman; Kütt, Lauri; Raja, Hadi Ashraf; Ahmadiyahangar, Roya; Rosin, Argo; Husev, Oleksandr 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCon): conference proceedings 2021 / p. 1-5 <https://doi.org/10.1109/RTUCon53541.2021.9711741>

Machine learning techniques for wireless-powered ambient backscatter communications : enabling intelligent iot networks in 6g era

Jameel, Furqan; **Sharma, Navuday;** Khan, Muhammad Awais; Khan, Imran; **Alam, Muhammad Mahtab;** Alam, Muhammad Mahtab; Mavromoustakis, Constandinos X. Internet of Things / 2020 https://doi.org/10.1007/978-3-030-44907-0_8 [Article collection metrics at Scopus](#) [Article at Scopus](#)

Multi-algorithm-based urban tree information extraction and Its applications in urban planning : research note

Yao, Chaowen; Fabritius, Eeva Henna Helena; Fricker, Pia; **Dembski, Fabian** Landscape and urban planning 2025 / art. 105226
<https://doi.org/10.1016/j.landurbplan.2024.105226>

Multi-stage deep learning networks for automated assessment of electricity transmission infrastructure using fly-by images

Manninen, Henri; Ramlal, Craig J.; Singh, Arvind; **Kilter, Jako; Landsberg, Mart** Electric power systems research 2022 / art. 107948 <https://doi.org/10.1016/j.eprsr.2022.107948> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A new efficient ALignment-driven Neural Network for mortality prediction from irregular multivariate time series data

Bignoumba, Nzamba; Mellouli, Nedra; **Ben Yahia, Sadok** Expert systems with applications 2024 / art. 122148
<https://doi.org/10.1016/j.eswa.2023.122148>

Non-determinism in nowadays computing and IT

Henno, Jaak; Jaakkola, Hannu; Mäkelä, Jukka 2020 43rd International Convention on Information, Communication and Electronic Technology (MIPRO), 28 Sept.-2 Oct. 2020, Opatija, Croatia : proceedings 2020 / p. 794-801
<https://doi.org/10.23919/MIPRO48935.2020.9245377>

Ontology modeling of the Estonian Traffic Act for self-driving buses

Nogales, Alberto; **Täks, Ermo; Taveter, Kuldar** Information Management and Big Data : 5th International Conference : SIMBig 2018, Lima, Peru, September 3–5, 2018 : proceedings 2019 / p. 249-256 https://doi.org/10.1007/978-3-030-11680-4_24 [Conference proceedings at Scopus](#) [Article at Scopus](#)

Orthophoto classification for UGV path planning using heterogeneous computing

Hudjakov, Robert; Tamre, Mart International journal of advanced robotic systems 2013 / [7] p. : ill <https://doi.org/10.5772/56545>
https://www.researchgate.net/publication/269785081_Orthophoto_Classification_for_UGV_Path_Planning_using_Heterogeneous_Computing
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Pavement defect segmentation in orthoframes with a pipeline of three convolutional neural networks

Lõuk, Roland; Riid, Andri; Pihlak, Rene; Tepljakov, Aleksei Algorithms 2020 / art. 198, 27 p. : ill <https://doi.org/10.3390/a13080198>
[Journal metrics at scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Preliminary results in using attention for increasing attack identification efficiency

Ahmad, Tanwir; Truscan, Dragos; **Vain, Juri** 2023 IEEE 16th International Conference on Software Testing, Verification and Validation Workshops, ICSTW 2023, 16-20 April 2023, Dublin, Ireland, Proceedings 2023 / p. 159 - 164
<https://doi.org/10.1109/ICSTW58534.2023.00038>

Residential load forecasting using recurrent neural networks

Shabbir, Noman; Ahmadiyahangar, Roya; Raja, Hadi Ashraf; Kütt, Lauri; Rosin, Argo 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings 2020 / p. 478-481 : ill
<https://doi.org/10.1109/CPE-POWERENG48600.2020.9161565>

A robust pathological voices recognition system based on DCNN and scattering transform

Souli, Sameh; Amam, Rimah; **Ben Yahia, Sadok** Applied acoustics 2021 / art. 107854 : ill
<https://doi.org/10.1016/j.apacoust.2020.107854> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Scene parsing using Fully Convolutional Network for Semantic Segmentation

Ali, Nisar; Ijaz, Ali Zeeshan; Ali, Raja Hashim; **Abideen, Zain Ul**; Bais, Abdul 2023 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), Regina, SK, Canada, 2023 2023 / p. 180-185 <https://doi.org/10.1109/CCECE58730.2023.10288934>

Semi-parametric approach to random forests for high-dimensional bayesian optimisation

Kuzmanovski, Vladimir; Hollmén, Jaakko Discovery Science : 25th International Conference, DS 2022, Montpellier, France, October 10–12, 2022, Proceedings 2022 / p. 418 - 428 https://doi.org/10.1007/978-3-031-18840-4_30 [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

Short-term PV energy generation forecasting using deep learning

Shabbir, Noman; Ahmadiyahangar, Roya; Rosin, Argo; Astapov, Victor; Kilter, Jako Telematique 2022
<https://www.provinciajournal.com/index.php/telematique/article/view/813>

The validation of graph model-based, gate level low-dimensional feature data for machine learning applications

Balakrishnan, Aneesh; Lange, Thomas; Glorieux, Maximilien; Alexandrescu, Dan; **Jenihhin, Maksim** 2019 IEEE Nordic Circuits and Systems Conference (NORCAS) : NORCHIP and International Symposium of System-on-Chip (SoC), 29-30 October 2019, Helsinki, Finland : proceedings in IEEE Xplore 2019 / 7 p <https://doi.org/10.1109/NORCHIP.2019.8906974>

Toward automatic condition assessment of high-voltage transmission infrastructure using deep learning techniques

Manninen, Henri; Ramlal, Craig J.; Singh, Arvind; Rocke, Sean; **Kilter, Jako; Landsberg, Mart** International journal of electrical power & energy systems 2021 / art. 106726 <https://doi.org/10.1016/j.ijepes.2020.106726> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)