References

- Alam, M. K., Aziz, A. A., Latif, S. A., & Awang, A. (2020). Error-aware data clustering for in-network data reduction in wireless sensor networks. Sensors, 20(4), 1011.
- Albaseer, A., Abdallah, M., Al-Fuqaha, A., & Erbad, A. (2022). Fine-grained data selection for improved energy efficiency of federated edge learning. IEEE Transactions on Network Science and Engineering, 9(5), 3258-3271. doi:10.1109/TNSE.2021.3100805
- Alotaibi, Z. N., Khouli, S. A., Ibrahim, A. B., Alrabeiah, M., Ragheb, A. M., Almaiman, A. S., & Alshebeili, S. A. (2022). Sky Imager Data Reduction Using Autoencoder and Internet of Things Computing. IEEE Access, 10, 111232-111240.
- Attaoui, A., Largo, S., Kaissari, S., Benba, A., Jilbab, A., & Bourouhou, A. (2020). Machine learning-based edge-computing on a multi-level architecture of WSN and IoT for real-time fall detection. IET Wireless Sensor Systems, 10(6), 320-332. Beraldo L. Um método de otimização com parâmetros de desempenho para Cloud Network Slices focado no locatário.
- Babiuch, M., Foltýnek, P., & Smutný, P. (2019, May). Using the ESP32 microcontroller for data processing. In 2019 20th International Carpathian Control Conference (ICCC) (pp. 1-6). IEEE.
- Basgall, M. J., Naiouf, M., & Fernández, A. (2021). FDR2-BD: A fast data reduction recommendation tool for tabular big data classification problems. Electronics, 10(15), 1757.
- Borova, M., Prauzek, M., Konecny, J., & Gaiova, K. (2022). A performance analysis of edge computing compression methods for environmental monitoring nodes with LoRaWAN communications. Paper presented at the IFAC-PapersOnLine, 55(4) 387-392. doi:10.1016/j.ifacol.2022.06.064 Retrieved from www.scopus.com
- Cavicchioli, R., Martoglia, R., & Verucchi, M. (2022). A novel real-time edge-cloud big data management and analytics framework for smart cities. Journal of Universal Computer Science, 28(1), 3-26. doi:10.3897/jucs.71645
- Coccia M, Roshani S, Mosleh M. Structure and Evolution of Sensor Ecosystem to Forecast Emerging Scientific and Technological Directions.
- Cooke, R. A., & Fahmy, S. A. (2020). A model for distributed in-network and near-edge computing with heterogeneous hardware. Future Generation Computer Systems, 105, 395-409.
- Costa, F.S.; Nassar, S.M.; Dantas, M.A.R. FOCUSeR: A Fog Online Context-Aware Upto-Date Sensor Ranking Method. J. Sens. Actuator Netw. 2022, 11, 25. https://doi.org/10.3390/jsan11020025
- Dechouniotis, D., Athanasopoulos, N., Leivadeas, A., Mitton, N., Jungers, R., & Papavassiliou, S. (2020). Edge computing resource allocation for dynamic networks: The DRUID-NET vision and perspective. Sensors, 20(8), 2191.
- Dubara, Himanshu V; Mahesh Parihar, and Krithi Ramamritham. 2021. Smart Energy Meter Calibration: An Edge Computation Method: Poster. In Proceedings of the Twelfth ACM International Conference on Future Energy Systems (e-Energy '21). Association for Computing Machinery, New York, NY, USA, 280–281. https://doi.org/10.1145/3447555.3466569

- Dube, S., Wan, W. Y., & Nugroho, H. (2021). A novel approach of IoT stream sampling and model update on the IoT edge device for class incremental learning in an edge-cloud system. IEEE Access, 9, 29180-29199.
- Fang Zhang, Qian Zhang, Zhitao Xiao, Jun Wu, and Yanbei Liu. 2019. Spherical Nanoparticle Parameter Measurement Method based on Mask R-CNN Segmentation and Edge Fitting. In Proceedings of the 2019 8th International Conference on Computing and Pattern Recognition (ICCPR '19). Association for Computing Machinery, New York, NY, USA, 205–212. https://doi.org/10.1145/3373509.3373590
- Feifei Chen, Xiaofeng Zhou, and Chao Shi. 2019. The Container Scheduling Method Based on the Min-Min in Edge Computing. In Proceedings of the 4th International Conference on Big Data and Computing (ICBDC '19). Association for Computing Machinery, New York, NY, USA, 83–90. https://doi.org/10.1145/3335484.3335506
- Garcia VF. Um arcabouço ferramental para implantação personalizável de serviços de rede virtualizados.
- Ghosh, A. M., & Grolinger, K. (2019, May). Deep learning: Edge-cloud data analytics for iot. In 2019 IEEE Canadian Conference of Electrical and Computer Engineering (CCECE) (pp. 1-7). IEEE.
- Ghosh, A. M., & Grolinger, K. (2020). Edge-cloud computing for Internet of Things data analytics: Embedding intelligence in the edge with deep learning. IEEE Transactions on Industrial Informatics, 17(3), 2191-2200.
- Guocheng Liu. 2021. An Image Combination Segmentation Method Based on Clustering Analysis and Edge Detection. In 2021 4th International Conference on Digital Medicine and Image Processing (DMIP '21). Association for Computing Machinery, New York, NY, USA, 30–34. https://doi.org/10.1145/3506651.3506975
- Hafeez, T., Xu, L., & Mcardle, G. (2021). Edge intelligence for data handling and predictive maintenance in IIOT. IEEE Access, 9, 49355-49371.
- Hu, S., Luo, Q., Li, C., Li, G., & Shi, W. (2021). Resource scheduling in edge computing: A survey. IEEE Communications Surveys & Tutorials, 23(4), 2131-2165.
- Huachen Tian, Yiquan Wu, and Song Geng. 2018. Edge Detection Method for Terahertz Image Based on Principal Component Analysis and Active Contour Model. In Proceedings of the 3rd International Conference on Multimedia and Image Processing (ICMIP 2018). Association for Computing Machinery, New York, NY, USA, 1–6. https://doi.org/10.1145/3195588.3195598
- Huang, J., Wan, J., Yu, J., Zhu, F., & Ren, Y. (2020). Edge computing-based adaptable trajectory transmission policy for vessels monitoring systems of marine fishery. IEEE Access, 8, 50684-50695.
- Jana Medková. 2020. Anonymization of geosocial network data by the (k, l)-degree method with location entropy edge selection. In Proceedings of the 15th International Conference on Availability, Reliability and Security (ARES '20). Association for Computing Machinery, New York, NY, USA, Article 91, 1–8. https://doi.org/10.1145/3407023.3409184
- Jerusha, D., & Jaya, T. (2022). Cryptographic lightweight encryption algorithm with dimensionality reduction in edge computing. Computer Systems Science and Engineering, 42(3), 1121-1132. doi:10.32604/csse.2022.022997

- Jing, W., Miao, Q., Song, H., & Chen, X. (2019). Data loss and reconstruction of location differential privacy protection based on edge computing. IEEE Access, 7, 75890-75900.
- Jun Guo, Yingying Ma, Dechao Gao, Bangzheng Wang, Xueyuan Liu, and Ying Liu. 2018. Large Vehicle Trajectory Tracing Method Based on Edge Calculation. In Proceedings of the International Conference on Information Technology and Electrical Engineering 2018 (ICITEE '18). Association for Computing Machinery, New York, NY, USA, Article 37, 1–6. https://doi.org/10.1145/3148453.3306276
- Kolisetty, Sai Bharath; PACHA, Praveen. A study on predictive maintenance using edge intelligence. 2022.
- Kolomvatsos, K., & Anagnostopoulos, C. (2020). A probabilistic model for assigning queries at the edge. Computing, 102(4), 865-892.
- Kumar, Neeraj; AGRAWAL, Alka; KHAN, Raess A. METHWORK: An Approach for Ranking of Research Trends with a Case Study for IoET. Recent Advances in Computer Science and Communications (Formerly: Recent Patents on Computer Science), v. 14, n. 4, p. 1273-1286, 2021.
- Kurup, S., & Guruprasad, H. S. (2022). Hybrid multi criteria decision methods for optimal cloud selection in mobile cloud computing. Indonesian Journal of Electrical Engineering and Computer Science, 27(1), 404-412. doi:10.11591/ijeecs.v27.i1.pp 404-412
- Li, Huan et al. Spatial data quality in the Internet of Things: Management, exploitation, and prospects. ACM Computing Surveys (CSUR), v. 55, n. 3, p. 1-41, 2022.
- Liu, Z., Ali, A., Kenesei, P., Miceli, A., Sharma, H., Schwarz, N., ... & Foster, I. (2021, November). Bridging data center AI systems with edge computing for actionable information retrieval. In 2021 3rd Annual Workshop on Extreme-scale Experiment-in-the-Loop Computing (XLOOP) (pp. 15-23). IEEE.
- Liu, Zhiming; Gan, Jianhong. 2022. Ultrasound image edge enhancement method based on Bayesian Non-Local Means and Convolution Neural Network. In Proceedings of the 2022 3rd International Conference on Control, Robotics and Intelligent System (CCRIS '22). Association for Computing Machinery, New York, NY, USA, 176–181. https://doi.org/10.1145/3562007.3562039
- Lu, YanHong; Meng Zhang, Hui Shi, and Xiaohong Qin. 2018. An edge-preserving completion method for airborne equipment monitoring data. In Proceedings of the 2nd International Conference on Digital Signal Processing (ICDSP 2018). Association for Computing Machinery, New York, NY, USA, 43–47. https://doi.org/10.1145/3193025.3193027
- Majeed, A. A., Kilpatrick, P., Spence, I., & Varghese, B. (2020, May). Modelling fog offloading performance. In 2020 IEEE 4th International Conference on Fog and Edge Computing (ICFEC) (pp. 29-38). IEEE.
- Matsuda, Akihiro; Tomokazu Matsui, Yuki Matsuda, Hirohiko Suwa, and Keiichi Yasumoto. 2020. A method for detecting street parking using dashboard camera videos on an edge device: demo abstract. In Proceedings of the 18th Conference on Embedded Networked Sensor Systems (SenSys '20). Association for Computing Machinery, New York, NY, USA, 585–586. https://doi.org/10.1145/3384419.3430464

- Md Juber Rahman and Bashir I. Morshed. 2021. A Minimalist Method Toward Severity Assessment and Progression Monitoring of Obstructive Sleep Apnea on the Edge. ACM Trans. Comput. Healthcare 3, 2, Article 16 (April 2022), 16 pages. https://doi.org/10.1145/3479432
- Mekala MS, Park W, Dhiman G, Srivastava G, Park JH, Jung HY. Deep learning inspired object consolidation approaches using lidar data for autonomous driving: a review. Archives of Computational Methods in Engineering. 2021 Dec 18:1-21.
- Mekala MS, Patan R, Gandomi AH, Park JH, Jung HY. A DRL based 4-r Computation Model for Object Detection on RSU using LiDAR in IloT. In2021 IEEE Symposium Series on Computational Intelligence (SSCI) 2021 Dec 5 (pp. 01-08). IEEE.
- Mekala MS, Rizwan P, Khan MS. Computational intelligent sensor-rank consolidation approach for industrial internet of things (iiot). IEEE Internet of Things Journal. 2021 Apr 15.
- Mekala MS, Srivastava G, Park JH, Jung HY. An effective communication and computation model based on a hybridgraph-deeplearning approach for SIoT. Digital Communications and Networks. 2022 Jul 19.
- Meng, HuiPing; Shi Wang, Feng Gao, JiZhao Lu, Yue Liu, and Yong Mei. 2021. Edge Computing Task Offloading Method for Load Balancing and Delay Optimization. In ACM Turing Award Celebration Conference China (ACM TURC 2021) (ACM TURC 2021). Association for Computing Machinery, New York, NY, USA, 173–178. https://doi.org/10.1145/3472634.3474067
- Mukherjee, D., Ghosh, S., Pal, S., Akila, D., Jhanjhi, N. Z., Masud, M., & AlZain, M. A. (2022). Optimized energy efficient strategy for data reduction between edge devices in cloud-IoT. Computers, Materials and Continua, 72(1), 125-140. doi:10.32604/cmc.2022.023611
- Nwogbaga, N. E., Latip, R., Affendey, L. S., & Rahiman, A. R. A. (2021). Investigation into the effect of data reduction in offloadable task for distributed IoT-fog-cloud computing. Journal of Cloud Computing, 10, 1-12.
- Piolli, Laércio et al. An overview of data reduction solutions at the edge of IoT systems: a systematic mapping of the literature. Computing, p. 1-23, 2022.
- Qian Guo, Tianhong Pan, Shan Chen, Xiaobo Zou, and Dorothy Yu Huang. 2020. A Novel Edge Effect Detection Method for Real-Time Cellular Analyzer Using Functional Principal Component Analysis. IEEE/ACM Trans. Comput. Biol. Bioinformatics 17, 5 (Sept.-Oct. 2020), 1563–1572. https://doi.org/10.1109/TCBB.2019.2903094
- Ramos, E. d. S. and Brasil, M. M. A. (2012). Um mapeamento sistemático sobre padrões de software para reengenharia de sistemas.
- Reddy, G. T., Reddy, M. P. K., Lakshmanna, K., Kaluri, R., Rajput, D. S., Srivastava, G., & Baker, T. (2020). Analysis of dimensionality reduction techniques on big data. Ieee Access, 8, 54776-54788.
- Renart, E. G., Veith, A. D. S., Balouek-Thomert, D., De Assunção, M. D., Lefevre, L., & Parashar, M. (2019, May). Distributed operator placement for IoT data analytics across edge and cloud resources. In 2019 19th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGRID) (pp. 459-468). IEEE.
- Sahar, G., Bakar, K. B. A., Zuhra, F. T., Rahim, S., Bibi, T., & Madni, S. H. H. (2021).

- Data redundancy reduction for energy-efficiency in wireless sensor networks: A comprehensive review. IEEE Access, 9, 157859-157888.
- Sayan Bhattacharya, Fabrizio Grandoni, and David Wajc. 2021. Online edge coloring algorithms via the nibble method. In Proceedings of the Thirty-Second Annual ACM-SIAM Symposium on Discrete Algorithms (SODA '21). Society for Industrial and Applied Mathematics, USA, 2830–2841.
- Scolati, R., Fronza, I., El Ioini, N., Elgazazz, A. S. A., & Pahl, C. (2019). A containerized big data streaming architecture for edge cloud computing on clustered single-board devices. In CLOSER 2019: Proceedings of the 9th International Conference on Cloud Computing and Services Science, Heraklion, Crete, Greece, May 2-4, 2019 (pp. 68-80). SciTe Press.
- Sen, T. and Shen, H. 2021. Context-aware Data Operation Strategies in Edge Systems for High Application Performance. In Proceedings of the 50th International Conference on Parallel Processing (ICPP '21). Association for Computing Machinery, New York, NY, USA, Article 2, 1 10. https://doi.org/10.1145/3472456.3472481
- Seo, H., Kim, H., Lee, K., & Lee, K. (2022). Multi-Sensor-Based Blind-Spot Reduction Technology and a Data-Logging Method Using a Gesture Recognition Algorithm Based on Micro E-Mobility in an IoT Environment. Sensors, 22(3), 1081.
- Shuangye Chen and Zhi Liu. 2019. An Image Processing Method Reducing Road Marking Line Edge Features for Patrol Robots Identifying Road Boundaries. In Proceedings of the 2019 3rd International Conference on Advances in Image Processing (ICAIP 2019). Association for Computing Machinery, New York, NY, USA, 29–33. https://doi.org/10.1145/3373419.3373455
- Souza C. A. de. Abordagem para detecção e prevenção de intrusão em computação de nevoeiro e IoT.
- Su, Haonan, and Cheolkon Jung. "Perceptual enhancement of low light images based on two-step noise suppression." IEEE Access 6 (2018): 7005-7018.
- Sun, H., Yu, Y., Sha, K., & Lou, B. (2019). mVideo: Edge computing based mobile video processing systems. IEEE Access, 8, 11615-11623.
- Taik, A., Moudoud, H., & Cherkaoui, S. (2021, October). Data-quality based scheduling for federated edge learning. In 2021 IEEE 46th Conference on Local Computer Networks (LCN) (pp. 17-23). IEEE.
- Tan, J., Liu, W., Xie, M., Song, H., Liu, A., Zhao, M., & Zhang, G. (2019). A low redundancy data collection scheme to maximize lifetime using matrix completion technique. EURASIP Journal on Wireless Communications and Networking, 2019(1), 1-29.
- Tang, Xianghong; XU, Lei; CHEN, Gongsheng. Research on the Rapid Diagnostic Method of Rolling Bearing Fault Based on Cloud Edge Collaboration. Entropy, v. 24, n. 9, p. 1277, 2022.
- Tanya Krzywinska, Tim Phillips, Alcwyn Parker, and Michael James Scott. 2020. From Immersion's Bleeding Edge to the Augmented Telegrapher: A Method for Creating Mixed Reality Games for Museum and Heritage Contexts. J. Comput. Cult. Herit. 13, 4, Article 32 (December 2020), 20 pages. https://doi.org/10.1145/3414832
- Tran NK. A Reference Architecture and a Software Platform for Engineering Internet of

- Things Search Engines (Doctoral dissertation).
- Verma J. Enabling Internet of Things through Sensor Cloud: A Review. Scalable Computing: Practice and Experience. 2021 Nov 24;22(4):445-62.
- Wang Na. 2020. A color image edge detection method based on entropy operator. In Proceedings of the 2nd International Conference on Industrial Control Network And System Engineering Research (ICNSER2020). Association for Computing Machinery, New York, NY, USA, 25–27. https://doi.org/10.1145/3411016.3411022
- Wang, T., Zhang, G., Liu, A., Bhuiyan, M. Z. A., & Jin, Q. (2019). A secure IoT service architecture with an efficient balance dynamics based on cloud and edge computing. IEEE Internet of Things Journal, 6(3), 4831-4843.
- Wang, X., Lu, S., Huang, W., Wang, Q., Zhang, S., & Xia, M. (2021). Efficient data reduction at the edge of industrial Internet of Things for PMSM bearing fault diagnosis. IEEE Transactions on Instrumentation and Measurement, 70, 1-12.
- Xiaolong Xu, Qihe Huang, Yiwen Zhang, Shancang Li, Lianyong Qi, and Wanchun Dou. 2021. An LSH-based Offloading Method for IoMT Services in Integrated Cloud-Edge Environment. ACM Trans. Multimedia Comput. Commun. Appl. 16, 3s, Article 94 (October 2020), 19 pages. https://doi.org/10.1145/3408319
- Xiaoming Huang, Pan Zhang, Rongqiang Feng, Chenxi Huang, Kun Zhang, and Kai Jin. 2021. Research on Cloud-Edge Collaborative Processing Method of Distribution Internet of Things Based on Attention-LSTM. In 2021 3rd International Conference on Artificial Intelligence and Advanced Manufacture (AIAM2021). Association for Computing Machinery, New York, NY, USA, 52–56. https://doi.org/10.1145/3495018.3495029
- Xu, C; Juan Yan, and Huibin Yang. 2021. Image stitching method based on image edge detection and SIFT algorithm. In Proceedings of the 2021 5th International Conference on Electronic Information Technology and Computer Engineering (EITCE 2021). Association for Computing Machinery, New York, NY, USA, 425–431. https://doi.org/10.1145/3501409.3501487
- Yadong Dong, Yongqi Sun, Chao Qin, and Weiguo Zhu. 2020. EPMDA: Edge Perturbation Based Method for miRNA-Disease Association Prediction. IEEE/ACM Trans. Comput. Biol. Bioinformatics 17, 6 (Nov.-Dec. 2020), 2170–2175. https://doi.org/10.1109/TCBB.2019.2940182
- Yan, Ma; Qi Dali, Chen Yufeng, Zou Lida, and Yang Feng. 2018. A Rapid Push Method of Cutting-edge Technological Knowledge Based on Cosine Distance. In Proceedings of the 2nd International Conference on Compute and Data Analysis (ICCDA 2018). Association for Computing Machinery, New York, NY, USA, 85–88. https://doi.org/10.1145/3193077.3193085
- Yang, Gao; Gong Hao, Lu Weijia, Wang Qinghua, Su Chen, and Ni Zhang. 2020. An Attentive Pruning Method for Edge Computing. In Proceedings of the 2020 12th International Conference on Machine Learning and Computing (ICMLC 2020). Association for Computing Machinery, New York, NY, USA, 6–10. https://doi.org/10.1145/3383972.3384008
- Yao Z, Tan L, She K. 5G-BSS: 5G-Based Universal Blockchain Smart Sensors. Sensors. 2022 Jun 18;22(12):4607.
- Yazdani, N., & Lucani, D. E. (2019, December). Protocols to reduce CPS sensor traffic

- using smart indexing and edge computing support. In 2019 IEEE Globecom Workshops (GC Wkshps) (pp. 1-6). IEEE.
- Yoshino, H., Ota, K., & Hiraguri, T. (2021). Traffic reduction technologies and data aggregation control to minimize latency in IoT systems. IEICE Transactions on Communications, 104(7), 706-715.
- Zhang Bo, Pan Jingchang, and Jiang Gaoyu. 2019. Intelligent Interactive Edge Detection Method of Image. In Proceedings of the 2019 3rd International Conference on Big Data Research (ICBDR 2019). Association for Computing Machinery, New York, NY, USA, 49–53. https://doi.org/10.1145/3372454.3372458
- Zheng, Dehua et al. An improved LDA-based ELM classification for intrusion detection algorithm in IoT application. Sensors, v. 20, n. 6, p. 1706, 2020.