

## REFERENCES

- [1] J. A. Kim, I. Cho and Y. Kim, "CDSS (Clinical Decision Support System) Architecture in Korea," 2008 International Conference on Convergence and Hybrid Information Technology, 2008, pp. 700-703, doi: 10.1109/ICHIT.2008.223.
- [2] A. Wright and D. Sittig, "SANDS: A service-oriented architecture for clinical decision support in a National Health Information Network", *Journal of Biomedical Informatics*, vol. 41, no. 6, pp. 962-981, 2008. Available: 10.1016/j.jbi.2008.03.001.
- [3] A. Wright and D. Sittig, "A four-phase model of the evolution of clinical decision support architectures", *International Journal of Medical Informatics*, vol. 77, no. 10, pp. 641-649, 2008. Available: 10.1016/j.ijmedinf.2008.01.004.
- [4] M. Afzal, M. Hussain, W. A. Khan, T. Ali, S. Lee and B. H. Kang, "KnowledgeButton: An evidence adaptive tool for CDSS and clinical research," 2014 IEEE International Symposium on Innovations in Intelligent Systems and Applications (INISTA) Proceedings, 2014, pp. 273-280, doi: 10.1109/INISTA.2014.6873630.
- [5] Y. Y. Chen, K. N. Goh and K. Chong, "Rule based clinical decision support system for hematological disorder," 2013 IEEE 4th International Conference on Software Engineering and Service Science, 2013, pp. 43-48, doi: 10.1109/ICSESS.2013.6615252.
- [6] X. Xiang, Z. Wang, Y. Jia and B. Fang, "Knowledge Graph-Based Clinical Decision Support System Reasoning: A Survey," 2019 IEEE Fourth International Conference on Data Science in Cyberspace (DSC), 2019, pp. 373-380, doi: 10.1109/DSC.2019.00063.
- [7] X. Liu, X. Zhan and L. Xiao, "An approach towards automatic generation of evidence-based decision support systems for clinical diagnosis based on an extensive clinical guideline schema," 2013 IEEE Third International Conference on Information

Science and Technology (ICIST), 2013, pp. 672-676, doi: 10.1109/ICIST.2013.6747635.

[8] J. Wang, "A Service-Oriented Architecture for Integrating Clinical Decision Support in a National E-Health System", 2011.

[9] D. E. Robbins, V. P. Gurupur and J. Tanik, "Information architecture of a clinical decision support system," 2011 Proceedings of IEEE Southeastcon, 2011, pp. 374-378, doi: 10.1109/SECON.2011.5752969.

[10] L. Tabares, J. Hernandez and I. Cabezas, "Architectural Approaches for Implementing Clinical Decision Support Systems in Cloud: A Systematic Review," 2016 IEEE First International Conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE), 2016, pp. 42-47, doi: 10.1109/CHASE.2016.55.

[11] G. Purcell, "What makes a good clinical decision support system", *BMJ*, vol. 330, no. 7494, pp. 740-741, 2005. Available: 10.1136/bmj.330.7494.740.

[12] K. Kawamoto, C. Houlihan, E. Balas and D. Lobach, "Improving clinical practice using clinical decision support systems: a systematic review of trials to identify features critical to success", *BMJ*, vol. 330, no. 7494, p. 765, 2005. Available: 10.1136/bmj.38398.500764.8f.

[13] S. El-Sappagh and S. El-Masri, "A Proposal of Clinical Decision Support system Architecture for Distributed Electronic Health Records".

[14] Liang Xiao, G. Cousins, T. Fahey, B. D. Dimitrov and L. Hederman, "Developing a rule-driven clinical decision support system with an extensive and adaptative architecture," 2012 IEEE 14th International Conference on e-Health Networking, Applications and Services (Healthcom), 2012, pp. 250-254, doi: 10.1109/HealthCom.2012.6379416.

[15] J. Kannry, L. McCullagh, A. Kushniruk, D. Mann, D. Edonyabo and T. McGinn, "A Framework for Usable and Effective Clinical Decision Support: Experience from

the iCPR Randomized Clinical Trial", *eGEMs (Generating Evidence & Methods to improve patient outcomes)*, vol. 3, no. 2, p. 10, 2015. Available: 10.13063/2327-9214.1150.

[16] R. van de Wetering, "IT-Enabled Clinical Decision Support: An Empirical Study on Antecedents and Mechanisms", *Journal of Healthcare Engineering*, vol. 2018, pp. 1-10, 2018. Available: 10.1155/2018/6945498.

[17] E. Murphy, "Clinical decision support: effectiveness in improving quality processes and clinical outcomes and factors that may influence success", *The Yale journal of biology and medicine*, vol. 872, pp. 187-197, 2014. Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4031792/>.

[18] D. Arnott and G. Pervan, "A Critical Analysis of Decision Support Systems Research Revisited: The Rise of Design Science", *Journal of Information Technology*, vol. 29, no. 4, pp. 269-293, 2014. Available: 10.1057/jit.2014.16.

[19] Y. Jiang, B. Qiu, C. Xu and C. Li, "The Research of Clinical Decision Support System Based on Three-Layer Knowledge Base Model", *Journal of Healthcare Engineering*, vol. 2017, pp. 1-8, 2017. Available: 10.1155/2017/6535286.

[20] M. Alavi and E. Joachimsthaler, "Revisiting DSS Implementation Research: A Meta-Analysis of the Literature and Suggestions for Researchers", *MIS Quarterly*, vol. 16, no. 1, p. 95, 1992. Available: 10.2307/249703.

[21] T. Kosaka and T. Hirouchi, "An effective architecture for Decision Support Systems", *Information & Management*, vol. 5, no. 1, pp. 7-17, 1982. Available: 10.1016/0378-7206(82)90014-3.

[22] V. Korde, "Text Classification and Classifiers:A Survey", *International Journal of Artificial Intelligence & Applications*, vol. 3, no. 2, pp. 85-99, 2012. Available: 10.5121/ijaia.2012.3208.

[23] S. M. H. Dadgar, M. S. Araghi and M. M. Farahani, "A novel text mining approach based on TF-IDF and Support Vector Machine for news classification," 2016

IEEE International Conference on Engineering and Technology (ICETECH), 2016, pp. 112-116, doi: 10.1109/ICETECH.2016.7569223.

[24] E. Ikonomakis, S. Kotsiantis and V. Tampakas, "Text Classification Using Machine Learning Techniques", *WSEAS Transactions on Computers*, vol. 48, pp. 966-974, 2005.

[25] R. Cretulescu, D. Morariu and L. Vintan, "Ongoing Research in Document Classification at the "Lucian Blaga" University of Sibiu", *5th International Symposium on Intelligent Distributed Computing IDC2011*, vol. 52011, 2011, , , 2011.

[26] M. Gogoi and S. Sarma, "Document Classification of Assamese Text Using Naïve Bayes Approach", *International Journal of Computer Trends and Technology*, vol. 30, no. 4, pp. 182-186, 2015. Available: 10.14445/22312803/ijctt-v30p132.

[27] B. P. C. Lim, M. H. Tsui, V. Charastrakul and D. Shi, "Web Search with Text Categorization Using Probabilistic Framework of SVM," 2006 IEEE International Conference on Systems, Man and Cybernetics, 2006, pp. 2950-2955, doi: 10.1109/ICSMC.2006.384566.

[28] B. Zhang, J. Su and X. Xu, "A Class-Incremental Learning Method for Multi-Class Support Vector Machines in Text Classification," 2006 International Conference on Machine Learning and Cybernetics, 2006, pp. 2581-2585, doi: 10.1109/ICMLC.2006.258853.

[29] F. Harrag, E. El-Qawasmeh and P. Pichappan, "Improving arabic text categorization using decision trees," 2009 First International Conference on Networked Digital Technologies, 2009, pp. 110-115, doi: 10.1109/NDT.2009.5272214.

[30] L. Breiman, "Random Forests", *Machine Learning*, vol. 45, no. 1, pp. 5-32, 2001. Available: 10.1023/a:1010933404324.

[31] Wyner et al., "Explaining the Success of AdaBoost and Random Forests as Interpolating Classifiers.", *Journal of Machine Learning Research*, vol. 18, 2015.

- [32] R. CASTILLO and A. KELEMEN, "Considerations for a Successful Clinical Decision Support System", *CIN: Computers, Informatics, Nursing*, vol. 31, no. 7, pp. 319-326, 2013. Available: 10.1097/nxn.0b013e3182997a9c.
- [33] R. Sutton, D. Pincock, D. Baumgart, D. Sadowski, R. Fedorak and K. Kroeker, "An overview of clinical decision support systems: benefits, risks, and strategies for success", *npj Digital Medicine*, vol. 3, no. 1, 2020. Available: 10.1038/s41746-020-0221-y.
- [34] "Clinical Decision Support Systems: How They Improve Care and Cut Costs", *AltexSoft*, 2022. [Online]. Available: <https://www.altexsoft.com/blog/clinical-decision-support-systems/#:~:text=Integrated%20in%20a%20CPOE%20system,cases%20of%20excessive%20medical%20testing>.
- [35] D. Sittig et al., "Grand challenges in clinical decision support", *Journal of Biomedical Informatics*, vol. 41, no. 2, pp. 387-392, 2008. Available: 10.1016/j.jbi.2007.09.003
- [36] A. Garg et al., "Effects of Computerized Clinical Decision Support Systems on Practitioner Performance and Patient Outcomes", *JAMA*, vol. 293, no. 10, p. 1223, 2005. Available: 10.1001/jama.293.10.1223
- [37] M. Alam, M. Rahman and M. Rahman, "A Random Forest based predictor for medical data classification using feature ranking", *Informatics in Medicine Unlocked*, vol. 15, p. 100180, 2019. Available: 10.1016/j.imu.2019.100180.
- [38] M. Bernardini, "Machine Learning approaches in Predictive Medicine using Electronic Health Records data", *Artificial Intelligence [cs.AI]. Università Politecnica delle Marche*, 2021.

- [39] J. Kobylarz et al., "A Machine Learning Early Warning System: Multicenter Validation in Brazilian Hospitals", 2020.
- [40] S. Rathi, M. Motwani and M. Ahirwar, "Data-Driven Clinical Decision Support System for Medical Diagnosis and Treatment Recommendation", *International Journal of Innovative Technology and Exploring Engineering*, vol. 8, no. 11, pp. 3660-3668, 2019. Available: 10.35940/ijitee.k1950.0981119.
- [41] M. Kamel Boulos and P. Zhang, "Digital Twins: From Personalised Medicine to Precision Public Health", *Journal of Personalized Medicine*, vol. 11, no. 8, p. 745, 2021. Available: 10.3390/jpm11080745.
- [42] S. Lundberg and S. Lee, "A unified approach to interpreting model predictions", *Advances in neural information processing systems*, pp. 4765–4774, 2017.
- [43] A. Altmann, L. Toloşi, O. Sander and T. Lengauer, "Permutation importance: a corrected feature importance measure", *Bioinformatics*, vol. 26, no. 10, pp. 1340-1347, 2010. Available: 10.1093/bioinformatics/btq134.
- [44] S. Ahalt et al., "Clinical Data: Sources and Types, Regulatory Constraints, Applications", *Clinical and Translational Science*, vol. 12, no. 4, pp. 329-333, 2019. Available: 10.1111/cts.12638.
- [45] Y. Jiang, B. Qiu, C. Xu and C. Li, "The Research of Clinical Decision Support System Based on Three-Layer Knowledge Base Model", *Journal of Healthcare Engineering*, vol. 2017, pp. 1-8, 2017. Available: 10.1155/2017/6535286.
- [46] Y. Y. Chen, K. N. Goh and K. Chong, "Rule based clinical decision support system for hematological disorder," 2013 IEEE 4th International Conference on Software Engineering and Service Science, 2013, pp. 43-48, doi: 10.1109/ICSESS.2013.6615252.

- [47] Y. Kumar and G. Sahoo, "Prediction of different types of liver diseases using rule based classification model", *Technology and Health Care*, vol. 21, no. 5, pp. 417-432, 2013. Available: 10.3233/thc-130742.
- [48] J. Singh, S. Bagga and R. Kaur, "Software-based Prediction of Liver Disease with Feature Selection and Classification Techniques", *Procedia Computer Science*, vol. 167, pp. 1970-1980, 2020. Available: 10.1016/j.procs.2020.03.226.
- [49] E. Capobianco, "Data-driven clinical decision processes: it's time", *Journal of Translational Medicine*, vol. 17, no. 1, 2019. Available: 10.1186/s12967-019-1795-5.
- [50] O. Sagi and L. Rokach, "Explainable decision forest: Transforming a decision forest into an interpretable tree", *Information Fusion*, vol. 61, pp. 124-138, 2020. Available: 10.1016/j.inffus.2020.03.013.
- [51] D. Petkovic, R. Altman, M. Wong and A. Vigil, "Improving the explainability of Random Forest classifier – user-centered approach", *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*, vol. 23, pp. 204–215, 2018.
- [52] M. Siraj-Ud-Douhah and M. Alam, "PERFORMANCE EVALUATION OF MACHINE LEARNING ALGORITHMS IN ECOLOGICAL DATASET", *International Journal of Applied Mathematics and Machine Learning*, vol. 10, no. 1, pp. 15-45, 2020. Available: 10.18642/ijamml\_7100122032.
- [53] M. Bal, M. Amasyali, H. Sever, G. Kose and A. Demirhan, "Performance Evaluation of the Machine Learning Algorithms Used in Inference Mechanism of a Medical Decision Support System", *The Scientific World Journal*, vol. 2014, pp. 1-15, 2014. Available: 10.1155/2014/137896.

[54] V. Belle and I. Papantonis, "Principles and Practice of Explainable Machine Learning", *Frontiers in Big Data*, vol. 4, 2021. Available: 10.3389/fdata.2021.688969.

[55] R. Studer, V. Benjamins and D. Fensel, "Knowledge engineering: Principles and methods", *Data & Knowledge Engineering*, vol. 25, no. 1-2, pp. 161-197, 1998. Available: 10.1016/s0169-023x(97)00056-6.

[56] D. Rubins et al., "Importance of clinical decision support system response time monitoring: a case report", *Journal of the American Medical Informatics Association*, vol. 26, no. 11, pp. 1375-1378, 2019. Available: 10.1093/jamia/ocz133.