## REFERENCES

- C. Das, O. Bass, G. Kothapalli, T. Mahmoud and D. Habibi, "Overview of energy storage systems in distribution networks: Placement, sizing, operation, and power quality", Renewable and Sustainable Energy Reviews, vol. 91, pp. 1205-1230, 2018.
- [2] F. Barrero-González, M. Milanés-Montero, E. González-Romera, E. Romero-Cadaval and C. Roncero-Clemente, "Control Strategy for Electric Vehicle Charging Station Power Converters with Active Functions", Energies, vol. 12, no. 20, p. 3971, 2019.
- [3] W. Pinthurat and B. Hredzak, "Decentralized Frequency Control of Battery Energy Storage Systems Distributed in Isolated Microgrid", Energies, vol. 13, no. 11, p. 3026, 2020.
- [4] Y. Xiao, "Model-Based Virtual Thermal Sensors for Lithium-Ion Battery in EV Applications", IEEE Transactions on Industrial Electronics, vol. 62, no. 5, pp. 3112-3122, 2015.
- [5] Y. Durmus et al., "Side by Side Battery Technologies with Lithium-Ion Based Batteries", Advanced Energy Materials, vol. 10, no. 24, p. 2000089, 2020.
- [6] Y. Miao, P. Hynan, A. von Jouanne and A. Yokochi, "Current Li-Ion Battery Technologies in Electric Vehicles and Opportunities for Advancements", Energies, vol. 12, no. 6, p. 1074, 2019.
- [7] A.M.S.M.H.S.Attanayaka, J.P.Karunadasa and K.T.M.U.Hemapala, "Estimation of state of charge for lithium-ion batteries - A Review", AIMS Energy, vol. 7, no. 2, pp. 186-210, 2019.
- [8] M. Danko, J. Adamec, M. Taraba, and P. Drgona, "Overview of batteries State of Charge estimation methods", Transportation Research Procedia, vol. 40, pp. 186-192, 2019.
- [9] F. Saidani, F. Hutter, R. Scurtu, W. Braunwarth and J. Burghartz, "Lithium-ion battery models: a comparative study and a model-based powerline communication", Advances in Radio Science, vol. 15, pp. 83-91, 2017.
- [10] M. Tomasov, M. Kajanova, P. Bracinik, and D. Motyka, "Overview of Battery Models for Sustainable Power and Transport Applications", Transportation Research Procedia, vol. 40, pp. 548-555, 2019.
- [11] A. Attanayaka, J. Karunadasa, and K. Hemapala, "Comprehensive electrothermal battery-model for Li-ion batteries in microgrid applications", Energy Storage, vol. 3, no. 3, 2021.
- [12] F. Eltoumi, A. Badji, M. Becherif, and H. Ramadan, "Experimental Identification using Equivalent Circuit Model for Lithium-Ion Battery", International Journal of Emerging Electric Power Systems, vol. 19, no. 3, 2018.
- [13] S. Madani, E. Schaltz and S. Knudsen Kær, "An Electrical Equivalent Circuit Model of a Lithium Titanate Oxide Battery", Batteries, vol. 5, no. 1, p. 31, 2019.
- [14] L. Chen et al., "Core temperature estimation based on the electro-thermal model of lithium-ion batteries", International Journal of Energy Research, vol. 44, no. 7, pp. 5320-5333, 2020.

- [15] Scribd.com,2021.[Online].Available:https://www.scribd.com/document/431
  668440/Matrix-MPS-3003-5L-3-DC-Power-Supply-Manual. [Accessed: 25-Aug- 2021].
- [16] "DCElectronicLoad Model6310ASeries", DCElectronicLoad Model6310ASeries, 2021. [Online]. Available: https://www.chromaate.com/en/product/dc\_electronic\_load\_6310a\_series\_63. [Accessed: 25- Aug- 2021].https://www.batteryspace.com/prodspecs/9989.specs.pdf
- [17] "IRFZ44N N-Channel Power MOSFET", Components101, 2021. [Online]. Available: https://components101.com/mosfets/irfz44n-datasheet-pinout-features. [Accessed: 25- Aug- 2021].
- [18] L. Saw, Y. Ye and A. Tay, "Electro-thermal analysis and integration issues of lithium ion battery for electric vehicles", Applied Energy, vol. 131, pp. 97-107, 2014.
- [19] X. Lin et al., "A lumped-parameter electro-thermal model for cylindrical batteries", Journal of Power Sources, vol. 257, pp. 1-11, 2014.
- [20] D. Petroşanu and A. Pîrjan, "Electricity Consumption Forecasting Based on a Bidirectional Long-Short-Term Memory Artificial Neural Network", Sustainability, vol. 13, no. 1, p. 104, 2020.
- [21] F. Izhari, H. Dhany, M. Zarlis and Sutarman, "Analysis backpropagation methods with neural network for prediction of children's ability in psychomotoric", Journal of Physics: Conference Series, vol. 978, p. 012085, 2018.
- [22] S. Kamada and T. Ichimura, "Fast training of adaptive structural learning method of deep learning for multi modal data", International Journal of Computational Intelligence Studies, vol. 7, no. 34, p. 169, 2018.
- [23] Y. Wu, Z. Bao, Y. Yuan, L. Zhang and Y. Feng, "Application of momentum backpropagation algorithm (MOBP) in identification of low-resistivity pay zones in sandstones", Journal of Petroleum Exploration and Production Technology, vol. 7, no. 1, pp. 23-32, 2016.
- [24] T. Nitta and Y. Kuroe, "Hyperbolic Gradient Operator and Hyperbolic Back-Propagation Learning Algorithms", IEEE Transactions on Neural Networks and Learning Systems, vol. 29, no. 5, pp. 1689-1702, 2018.
- [25] V. Sharma, "Classification of Malignant Melanoma and Benign Skin Lesion with the Aid of Using Back Propagation Neural Network and ABCD Rule", International Journal of Psychosocial Rehabilitation, vol. 24, no. 5, pp. 1325-1331, 2020.
- [26] Time Series Analysis Using Deep Feedforward Neural Networks Download Full – PDF Book Download", All-med.net, 2021. [Online]. Available: https://allmed.net/pdf/time-series-analysis-using-deep-feedforward-neural-networks/. [Accessed: 30- Aug- 2021].
- [27] Z. Boussaada, O. Curea, A. Remaci, H. Camblong, and N. Mrabet Bellaaj, "A Nonlinear Autoregressive Exogenous (NARX) Neural Network Model for the

Prediction of the Daily Direct Solar Radiation", Energies, vol. 11, no. 3, p. 620, 2018.

- [28] W. Saputra, Tulus, M. Zarlis, R. Sembiring, and D. Hartama, "Analysis Resilient Algorithm on Artificial Neural Network Backpropagation", Journal of Physics: Conference Series, vol. 930, p. 012035, 2017.
- [29] C. Chen and J. Lin, "Applying Rprop Neural Network for the Prediction of the Mobile Station Location", Sensors, vol. 11, no. 4, pp. 4207-4230, 2011.
- [30] 2021[Online].Available:https://www.researchgate.net/publication/30396991
  0\_Evaluation\_of\_QuickProp\_for\_Learning\_Deep\_Neural\_Networks\_A\_Critical Review. [Accessed: 30- Aug- 2021].
- [31] C. Brust, S. Sickert, M. Simon, E. Rodner and J. Denzler, "Neither Quick Nor Proper -- Evaluation of QuickProp for Learning Deep Neural Networks", arXiv.org, 2021. [Online]. Available: https://arxiv.org/abs/1606.04333. [Accessed: 30- Aug- 2021].
- [32] G. Chitalia, M. Pipattanasomporn, V. Garg and S. Rahman, "Robust shortterm electrical load forecasting framework for commercial buildings using deep recurrent neural networks", Applied Energy, vol. 278, p. 115410, 2020.
- [33] M. Lipu, M. Hannan, A. Hussain, M. Saad, A. Ayob and F. Blaabjerg, "State of Charge Estimation for Lithium-Ion Battery Using Recurrent NARX Neural Network Model Based Lighting Search Algorithm", IEEE Access, vol. 6, pp. 28150-28161, 2018.
- [34] G. Chuangxin, Y. Gen, Z. Chengzhi, W. Xueping, and C. Xiu, "SoC Estimation for Lithium-Ion Battery Using Recurrent NARX Neural Network and Genetic Algorithm", IOP Conference Series: Materials Science and Engineering, vol. 486, p. 012076, 2019.
- [35] N. Ganatra and A. Patel, "A Comprehensive Study of Deep Learning Architectures, Applications and Tools", International Journal of Computer Sciences and Engineering, vol. 6, no. 12, pp. 701-705, 2018.
- [36] W. Waheeb and R. Ghazali, "Chaotic Time Series Forecasting Using Higher Order Neural Networks", International Journal on Advanced Science, Engineering and Information Technology, vol. 6, no. 5, p. 624, 2016.
- [37] L. Polania and K. Barner, "Exploiting Restricted Boltzmann Machines and Deep Belief Networks in Compressed Sensing", IEEE Transactions on Signal Processing, vol. 65, no. 17, pp. 4538-4550, 2017.
- [38] V. Mnih et al., "Human-level control through deep reinforcement learning", Nature, vol. 518, no. 7540, pp. 529-533, 2015.
- [39] N. Nguyen, T. Nguyen, and S. Nahavandi, "System Design Perspective for Human-Level Agents Using Deep Reinforcement Learning: A Survey", IEEE Access, vol. 5, pp. 27091-27102, 2017.
- [40] G. B and J. Selvakumar, "Appropriate allocation of workloads on performance asymmetric multicore architectures via deep learning algorithms", Microprocessors and Microsystems, vol. 73, p. 102996, 2020.
- [41] A. Shrestha and A. Mahmood, "Review of Deep Learning Algorithms and Architectures", IEEE Access, vol. 7, pp. 53040-53065, 2019.

- [42] Ibm.com,2021.[Online].Available:https://www.ibm.com/university/power/i mages/Evaluation of Deep Learning Frameworks over Different HPC Architectures.pdf. [Accessed: 30- Aug- 2021].
- [43] S. Bahrampour, N. Ramakrishnan, L. Schott and M. Shah, "Comparative Study of Caffe, Neon, Theano, and Torch for Deep Learning", arXiv.org, 2021. [Online]. Available: https://arxiv.org/abs/1511.06435v1. [Accessed: 25- Aug-2021].
- [44] Theano Development Team, "Theano: A Python framework for fast computation of mathematical expressions,"arXiv e-prints," 2016. [Online]. Available: http://arxiv.org/abs/ 1605.0268
- [45] A. Shrestha and A. Mahmood, "Improving Genetic Algorithm with Fine-Tuned Crossover and Scaled Architecture", Journal of Mathematics, vol. 2016, pp. 1-10, 2016.
- [46] D. Goldberg, "A hydroinformatician's approach to computational innovation and the design of genetic algorithms", Journal of Hydroinformatics, vol. 2, no. 3, pp. 155-162, 2000.
- [47] Www4.stat.ncsu.edu,2021.[Online].Available:https://www4.stat.ncsu.edu/~l u/ST7901/reading%20materials/Adam\_algorithm.pdf. [Accessed: 30- Aug-2021].
- [48] X. Yuan, Z. Feng, M. Norton, and X. Li, "Generalized Batch Normalization: Towards Accelerating Deep Neural Networks", Proceedings of the AAAI Conference on Artificial Intelligence, vol. 33, pp. 1682-1689, 2019.
- [49] I. Tantawi, M. Abushariah and B. Hammo, "A deep learning approach for automatic speech recognition of The Holy Qur'ān recitations", 2021.
- [50] S. H. Bach, B. D. He, A. Ratner, and C. Re, "Learning the structure of generative models without labeled data," in ICML, p. 273–282, 2017.
- [51] N. Polyzotis, S. Roy, S. Whang, and M. Zinkevich, "Data Lifecycle Challenges in Production Machine Learning", ACM SIGMOD Record, vol. 47, no. 2, pp. 17-28, 2018.
- [52] "Collaborative Data Science Databricks", Databricks, 2021. [Online]. Available: https://databricks.com/solutions/data-science. [Accessed: 30- Aug-2021].
- [53] S. Bhattacherjee, A. Chavan, S. Huang, A. Deshpande, and A. Parameswaran, "Principles of dataset versioning", Proceedings of the VLDB Endowment, vol. 8, no. 12, pp. 1346-1357, 2015.
- [54] S. Hochreiter, "The Vanishing Gradient Problem During Learning Recurrent Neural Nets and Problem Solutions", International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, vol. 06, no. 02, pp. 107-116, 1998.
- [55] Z. Hu, J. Zhang, and Y. Ge, "Handling Vanishing Gradient Problem Using Artificial Derivative", IEEE Access, vol. 9, pp. 22371-22377, 2021.
- [56] E. Dos Santos, R. Sabourin, and P. Maupin, "Overfitting cautious selection of classifier ensembles with genetic algorithms", Information Fusion, vol. 10, no. 2, pp. 150-162, 2009.

- [57] A. Piotrowski and J. Napiorkowski, "A comparison of methods to avoid overfitting in neural networks training in the case of catchment runoff modelling", Journal of Hydrology, vol. 476, pp. 97-111, 2013.
- [58] "A study of cross-validation and bootstrap for accuracy estimation and model selection | Proceedings of the 14th international joint conference on Artificial intelligence - Volume 2", Dl.acm.org, 2021. [Online]. [Accessed: 30- Aug- 2021].
- [59] X. Ying, "An Overview of Overfitting and its Solutions", Journal of Physics: Conference Series, vol. 1168, p. 022022, 2019.
- [60] J. Wang, J. Jiang, and R. Yu, "Robust backpropagation algorithm as a chemometric tool to prevent the overfitting to outliers", Chemometrics and Intelligent Laboratory Systems, vol. 34, no. 1, pp. 109-115, 1996.
- [61] K. Kim and R. Simon, "Overfitting, generalization, and MSE in class probability estimation with high-dimensional data", Biometrical Journal, vol. 56, no. 2, pp. 256-269, 2013.
- [62] D. Rivero, E. Fernandez-Blanco, C. Fernandez-Lozano, and A. Pazos, "Population subset selection for the use of a validation dataset for overfitting control in genetic programming", Journal of Experimental & Theoretical Artificial Intelligence, vol. 32, no. 2, pp. 243-271, 2019.
- [63] Chan. K.Y, Kwong. C.K, Dillon, et al, "Reducing overfitting in manufacturing process modeling using a backward elimination based genetic programming. Applied Soft Computing," 2011.
- [64] A. Poernomo and D. Kang, "Biased Dropout and Crossmap Dropout: Learning towards effective Dropout regularization in convolutional neural network", Neural Networks, vol. 104, pp. 60-67, 2018.
- [65] L. Prechelt, "Automatic early stopping using cross-validation: quantifying the criteria", Neural Networks, vol. 11, no. 4, pp. 761-767, 1998.
- [66] "4 Ways to Prevent Overfitting in Machine Learning", Adatis, 2021. [Online]. Available: https://adatis.co.uk/4-ways-to-prevent-overfitting-in-machinelearning/. [Accessed: 30- Aug- 2021].
- [67] D. Yi, S. Ji, and J. Park, "An Adaptive Optimization Method Based on Learning Rate Schedule for Neural Networks", Applied Sciences, vol. 11, no. 2, p. 850, 2021.
- [68] Z. Bi and C. Zhou, "Understanding the computation of time using neural network models", Proceedings of the National Academy of Sciences, vol. 117, no. 19, pp. 10530-10540, 2020.
- [69] R. Adhikari and R. Agrawal, "An Introductory Study on Time Series Modeling and Forecasting", arXiv.org, 2021. [Online]. Available: https://arxiv.org/abs/1302.6613. [Accessed: 25- Aug- 2021].
- [70] V. Chandran, C. Patil, A. Karthick, D. Ganeshaperumal, R. Rahim and A. Ghosh, "State of Charge Estimation of Lithium-Ion Battery for Electric Vehicles Using Machine Learning Algorithms", World Electric Vehicle Journal, vol. 12, no. 1, p. 38, 2021.

- [71] M. Hannan et al., "Toward Enhanced State of Charge Estimation of Lithiumion Batteries Using Optimized Machine Learning Techniques", Scientific Reports, vol. 10, no. 1, 2020.
- [72] "Learning an Adaptive Learning Rate Schedule", DeepAI, 2021. [Online]. Available: https://deepai.org/publication/learning-an-adaptive-learning-rateschedule. [Accessed: 30- Aug- 2021].
- [73] J. Lv, B. Jiang, X. Wang, Y. Liu, and Y. Fu, "Estimation of the State of Charge of Lithium Batteries Based on Adaptive Unscented Kalman Filter Algorithm", Electronics, vol. 9, no. 9, p. 1425, 2020.
- [74] I. Baccouche, S. Jemmali, B. Manai, N. Omar and N. Amara, "Improved OCV Model of a Li-Ion NMC Battery for Online SOC Estimation Using the Extended Kalman Filter", Energies, vol. 10, no. 6, p. 764, 2017