

## REFERENCES

- Ali, M., Hossain, M. A. F., Sukanya, M. I., & Chakraborty, R. (2021). Real-time Density-Based Dynamic Traffic Light Controller Using FPGA. *Proceedings of 2021 IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering, WIECON-ECE 2021*, 25–28. <https://doi.org/10.1109/WIECON-ECE54711.2021.9829691>
- Arifoglu, D., & Bouchachia, H. (2017). Activity Recognition and Abnormal Behaviour Detection with Recurrent Neural Networks. *Procedia Computer Science*, 110, 86–93. <https://doi.org/10.1016/j.procs.2017.06.121>
- Arkanuddin, A. S. I. B., Sulistyo, S., & Persada, A. G. (2019). Adaptive Traffic Light Control Based on Actual Condition Using Google Map API. *IJITEE (International Journal of Information Technology and Electrical Engineering)*, 3(2), 61. <https://doi.org/10.22146/ijitee.49964>
- Ata, A., Khan, M. A., Abbas, S., Khan, M. S., & Ahmad, G. (2021). Adaptive IoT Empowered Smart Road Traffic Congestion Control System Using Supervised Machine Learning Algorithm. *The Computer Journal*, 64(11), 1672–1679. <https://doi.org/10.1093/comjnl/bxz129>
- Azevedo, T., de Araújo, P. J. M., Rossetti, R. J. F., & Rocha, A. P. C. (2016). *JADE, TraSMAPI and SUMO: A tool-chain for simulating traffic light control*. <https://doi.org/10.13140/2.1.2739.4886>
- Caron, M., Bojanowski, P., Mairal, J., & Joulin, A. (2019). Unsupervised pre-training of image features on non-curated data. *Proceedings of the IEEE International Conference on Computer Vision, 2019-Octob*, 2959–2968. <https://doi.org/10.1109/ICCV.2019.00305>

- Choe, C. J., Baek, S., Woon, B., & Kong, S. H. (2019). Deep Q learning with LSTM for traffic light control. *2018 24th Asia-Pacific Conference on Communications, APCC 2018*, 331–336. <https://doi.org/10.1109/APCC.2018.8633520>
- Clarkson, H., Oglesby, R., & Hicks, R. G. (1982). Highway engineering. *New York*, 730.
- Diwan, T., Anirudh, G., & Tembhurne, J. V. (2023). Object detection using YOLO: challenges, architectural successors, datasets and applications. *Multimedia Tools and Applications*, 82(6), 9243–9275. <https://doi.org/10.1007/s11042-022-13644-y>
- François-lavet, V., Henderson, P., Islam, R., Bellemare, M. G., François-lavet, V., Pineau, J., & Bellemare, M. G. (2018). An Introduction to Deep Reinforcement Learning. *Foundations and Trends in Machine Learning*, II(3–4), 1–140. <https://doi.org/10.1561/22000000071>. Vincent
- Gandhi, M. M., Solanki, D. S., Daptardar, R. S., & Baloorkar, N. S. (2020). Smart Control of Traffic Light Using Artificial Intelligence. *2020 5th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE)*, 1–6. <https://doi.org/10.1109/ICRAIE51050.2020.9358334>
- Helmi, S., & Wahab, W. (2023). *Traffic Congestion Effect on Socio-Economic of Road Users in Palembang City* (Issue 3). Atlantis Press SARL. [https://doi.org/10.2991/978-2-38476-072-5\\_9](https://doi.org/10.2991/978-2-38476-072-5_9)
- Jocher, G., Nishimura, K., Mineeva, T., & Vilariño, R. (2020). yolov5. *Code Repository*.
- Krajzewicz, D. (2010). Traffic simulation with SUMO – Simulation of urban mobility. *International Series in Operations Research and Management Science*, 145, 269–293. [https://doi.org/10.1007/978-1-4419-6142-6\\_7](https://doi.org/10.1007/978-1-4419-6142-6_7)
- Lei, Z., & Yigong, S. (2023). Intelligent Traffic System Using Machine Learning Techniques: A Review. *International Journal of Research Publication and*

- Reviews*, 4(5), 1457–1461. <https://doi.org/10.55248/gengpi.234.5.38047>
- Liao, L., Liu, J., Wu, X., Zou, F., Pan, J., Sun, Q., Li, S. E., & Zhang, M. (2020). Time Difference Penalized Traffic Signal Timing by LSTM Q-Network to Balance Safety and Capacity at Intersections. *IEEE Access*, 8, 80086–80096. <https://doi.org/10.1109/ACCESS.2020.2989151>
- Mahesh Batta. (2020). Machine Learning Algorithms - A Review. *International Journal of Science and Research (IJSR)*, October. <https://doi.org/10.21275/ART20203995>
- Natafqi, M. B., Osman, M., Haidar, A. S., & Hamandi, L. (2018). Smart Traffic Light System Using Machine Learning. *2018 IEEE International Multidisciplinary Conference on Engineering Technology (IMCET)*, 1–6. <https://doi.org/10.1109/IMCET.2018.8603041>
- Navarro-Espinoza, A., López-Bonilla, O. R., García-Guerrero, E. E., Tlelo-Cuautle, E., López-Mancilla, D., Hernández-Mejía, C., & Inzunza-González, E. (2022). Traffic Flow Prediction for Smart Traffic Lights Using Machine Learning Algorithms. *Technologies*, 10(1), 1–11. <https://doi.org/10.3390/technologies10010005>
- Olah. (2015). *Understanding LSTM Networks*. <https://colah.github.io/posts/2015-08-Understanding-LSTMs/>
- Rebala, G., Ravi, A., & Churiwala, S. (2019). *An Introduction to Machine Learning*. <https://doi.org/10.1007/978-3-030-15729-6>
- Redmon, J., Divvala, S., Girshick, R., & Farhadi, A. (2016). *You Only Look Once: Unified, Real-Time Object Detection*. <https://doi.org/10.1109/CVPR.2016.91>
- Shaharuddin, R. A., & Misro, M. Y. (2023). Controlling Traffic Congestion in Urbanised City: A Framework Using Agent-Based Modelling and Simulation Approach. In *ISPRS International Journal of Geo-Information* (Vol. 12, Issue 6). <https://doi.org/10.3390/ijgi12060226>

- Singh, D., Merdivan, E., Hanke, S., Kropf, J., Geist, M., & Holzinger, A. (2017). *Convolutional and Recurrent Neural Networks for Activity Recognition in Smart Environment* (pp. 194–205). [https://doi.org/10.1007/978-3-319-69775-8\\_12](https://doi.org/10.1007/978-3-319-69775-8_12)
- Song, X., Liu, Y., Xue, L., Wang, J., Zhang, J., Wang, J., Jiang, L., & Cheng, Z. (2020). Time-series well performance prediction based on Long Short-Term Memory (LSTM) neural network model. *Journal of Petroleum Science and Engineering*, 186, 106682. <https://api.semanticscholar.org/CorpusID:209727521>
- Tax, N. (2018). Human Activity Prediction in Smart Home Environments with LSTM Neural Networks. *2018 14th International Conference on Intelligent Environments (IE)*, 40–47. <https://doi.org/10.1109/IE.2018.00014>
- Taye, M. M. (2023). Understanding of Machine Learning with Deep Learning: Architectures, Workflow, Applications and Future Directions. In *Computers* (Vol. 12, Issue 5). <https://doi.org/10.3390/computers12050091>
- Tran-Van, N. Y., Nguyerr, X. H., & Le, K. H. (2022). Towards Smart Traffic Lights based on Deep Learning and Traffic Flow Information. *Proceedings - 2022 9th NAFOSTED Conference on Information and Computer Science, NICS 2022*, 3, 99–104. <https://doi.org/10.1109/NICS56915.2022.10013375>
- Wang, C. Y., Mark Liao, H. Y., Wu, Y. H., Chen, P. Y., Hsieh, J. W., & Yeh, I. H. (2020). CSPNet: A new backbone that can enhance learning capability of CNN. *IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops*, 2020-June, 1571–1580. <https://doi.org/10.1109/CVPRW50498.2020.00203>
- Yao, J., Qi, J., Zhang, J., Shao, H., Yang, J., & Li, X. (2021). A Real-Time Detection Algorithm for Kiwifruit Defects Based on YOLOv5. In *Electronics* (Vol. 10, Issue 14). <https://doi.org/10.3390/electronics10141711>
- Yu, F. R., & He, Y. (2019). *Reinforcement Learning and Deep Reinforcement*

*Learning BT - Deep Reinforcement Learning for Wireless Networks* (F. R. Yu & Y. He (eds.); pp. 15–19). Springer International Publishing.  
[https://doi.org/10.1007/978-3-030-10546-4\\_2](https://doi.org/10.1007/978-3-030-10546-4_2)

Zeng, J., Hu, J., & Zhang, Y. (2018). Adaptive Traffic Signal Control with Deep Recurrent Q-learning. *IEEE Intelligent Vehicles Symposium, Proceedings, 2018-June(Iv)*, 1215–1220. <https://doi.org/10.1109/IVS.2018.8500414>

Zhao, T., Wang, P., & Li, S. (2019). Traffic signal control with deep reinforcement learning. *Proceedings - 2019 International Conference on Intelligent Computing, Automation and Systems, ICICAS 2019*, 2(c), 763–767. <https://doi.org/10.1109/ICICAS48597.2019.00164>