

## References

- Airlangga: Making Indonesia 4.0 untuk Hadapi Era Industri Digital*. (2021, December 3). Radar Kediri. Retrieved November 16, 2022, from <https://radarkediri.jawapos.com/showcase/03/12/2021/airlangga-making-indonesia-40-untuk-hadapi-era-industri-digital/>
- Anthony, L., Kanding, B., & Selvan, R. (2020). Carbontracker: Tracking and Predicting the Carbon Footprint of Training Deep Learning Models. *ArXiv :2007.03051*.
- Arcos-García, Á., Alvarez-Garcia, J., & Soria Morillo, L. (2018). Deep neural network for traffic sign recognition systems: An analysis of spatial transformers and stochastic optimisation methods. *Neural Networks*, 99. 10.1016/j.neunet.2018.01.005.
- Automotive Artificial Intelligence Market by Size, Share, Forecasts, & Trends Analysis*. (n.d.). Meticulous Research. Retrieved November 16, 2022, from <https://www.meticulousresearch.com/product/automotive-artificial-intelligence-market-4996#description>
- De La Escalera, A., Moreno, L. E., Salichs, M. A., & Armingol, J. M. (1997). Road traffic sign detection and classification. *IEEE transactions on industrial electronics*, 44, 848–859.

- Dickmanns, E. D., & Zapp, A. (1986, October). A curvature-based scheme for improving road vehicle guidance by computer vision. *Mobile Robots, SPIE*.
- Goodfellow, I., Bengio, Y., & Courville, A. (2016). Deep Learning. *MIT Press, I*.
- Hubel, D. H., & Wiesel, T. N. (1962). Receptive fields, binocular interaction and functional architecture in the cat's visual cortex. *Journal of Physiology*, 160(1), 106-154.
- Indonesia: number of cars 2021*. (2022, October 12). Statista. Retrieved November 16, 2022, from <https://www.statista.com/statistics/978871/indonesia-number-of-cars-use/>
- Jarrett, K., Kavukcuoglu, K., Ranzato, M., & LeCun, Y. (2009). What is the best multi-stage architecture for object recognition? *IEEE 12th International Conference on Computer Vision*, (2146-2153). 10.1109/ICCV.2009.5459469
- Khamparia, A., & Singh, K. (2019). A systematic review on deep learning architectures and applications. *Expert Systems*, 36. e12400. 10.1111/exsy.12400
- Kingma, D. P., & Ba, J. L. (2015). Adam: a Method for Stochastic Optimization. *International Conference on Learning Representations 2015*, 1-15.
- Lawrence, S., Lee Giles, C., Tsoi, & A.C. and Back. (n.d.). Face Recognition: A Convolutional Neural-Network Approach. *IEEE Transactions on Neural Networks*, 9, 98-113. 10.1109/72.554195.
- Lehr, J., Philipps, J., Nguyen Hoang, V., & von Wrangel, D. (2021). Supervised learning vs. unsupervised learning: A comparison for optical inspection

applications in quality control. *IOP Conference Series: Materials Science and Engineering*, 1140. 10.1088/1757-899X/1140/1/012049

Lin, T. Y., Maire, M., Belongie, S., Hays, J., Perona, P., Ramanan, D., Dollar, P., & Zitnick, C. L. (2014). Microsoft COCO: Common objects in context. *ECCV*.  
*Losing Paradise*. (2012, October 29). YouTube. Retrieved November 16, 2022, from <https://www.forbes.com/sites/insights-ibmai/2020/05/21/where-asia-is-taking-the-world-with-ai/?sh=5a69e1567947>

Nagpal, R., Paturu, C. K., Ragavan, V., R, N. R., Bhat, R., & Ghosh, D. (2019). Real-time traffic sign recognition using the deep network for embedded platforms. *Proc. IS&T Int'l. Symp. on Electronic Imaging: Autonomous Vehicles and Machines Conference*, 33-1 - 33-8.  
10.2352/ISSN.2470-1173.2019.15.AVM-033

Nair, V., & Hinton, G. E. (2010). Rectified linear units improve restricted boltzmann machines. *Proceedings of the 27th International Conference on International Conference on Machine Learning (ICML'10)*, 807–814.

O'Shea, K., & Nash, R. (2015). An Introduction to Convolutional Neural Networks. *arXiv*.

Pouyanfar, S., Sadiq, S., Yan, Y., Tian, H., Tao, Y., Reyes, M. P., Shyu, M.-L., Chen, S.-C., & Iyengar, S. S. (2019). A Survey on Deep Learning: Algorithms, Techniques, and Applications. *ACM Comput, Surv.* 51(5), 36.  
10.1145/3234150

Qureshi, K., & Abdullah, H. (2013). A Survey on Intelligent Transportation Systems.

*Middle-East Journal of Scientific Research*, (15), 629-642.

0.5829/idosi.mejsr.2013.15.5.11215.

Scherer, D., Muller, A., & Behnke, S. (2010). Evaluation of Pooling Operations in

Convolutional Architectures for Object Recognition. *Lecture Notes in  
Computer Science*, 92-101.

Strubell, E., Ganesh, A., & McCallum, A. (2019). Energy and Policy Considerations

for Deep Learning in NLP. *ArXiv:1906.02243*.

Tai, S. K., Dewi, C., Chen, R. C., Liu, Y. T., Jiang, X., & Yu, H. (2020). Deep

Learning for Traffic Sign Recognition Based on Spatial Pyramid Pooling with  
Scale Analysis. *Applied Sciences*. 10.3390/app10196997

United Nations Economic Commission for Europe. (1968). Convention on road signs  
and signals.

Wynsberghe, A. (2021). Sustainable AI: AI for sustainability and the sustainability of

AI. *AI and Ethics*, (1). 10.1007/s43681-021-00043-6.

Xing, J., & Yan, W. (2021). Traffic Sign Recognition Using Guided Image Filtering.

*Geometry and Vision*, 85-99. 10.1007/978-3-030-72073-5\_7

Zoph, B., Cubuk, E. D., Ghiasi, G., Lin, T. Y., Shlens, J., & Le, Q. V. (2019).

Learning Data Augmentation Strategies for Object Detection. *arXiv*, 1-13.