

REFERENCES

- [1] World Health Organization, *Global status report on road safety 2018*. Geneva: World Health Organization, 2018. Accessed: Jun. 03, 2023. [Online]. Available: <https://apps.who.int/iris/handle/10665/276462>
- [2] W. Bank, “Delivering Road Safety in Sri Lanka,” Feb. 2020, doi: 10.1596/33341.
- [3] M. Aljaban, “Analysis of Car Accidents Causes in the USA”.
- [4] R. Kumarage, S. M. Wickramasinghe, and M. D. R. P. Jayaratne, “Analysis Of Road Accidents in Sri Lanka.” 2003.
- [5] Đ. Petrović, R. Mijailović, and D. Pešić, “Traffic Accidents with Autonomous Vehicles: Type of Collisions, Manoeuvres and Errors of Conventional Vehicles’ Drivers,” *Transportation Research Procedia*, vol. 45, pp. 161–168, 2020, doi: 10.1016/j.trpro.2020.03.003.
- [6] L. Alzubaidi *et al.*, “Review of deep learning: concepts, CNN architectures, challenges, applications, future directions,” *Journal of Big Data*, vol. 8, no. 1, p. 53, Mar. 2021, doi: 10.1186/s40537-021-00444-8.
- [7] A. Cheok and E. Zhang, *From Turing to Transformers: A Comprehensive Review and Tutorial on the Evolution and Applications of Generative Transformer Models*. 2023. doi: 10.32388/3NTOLQ.2.
- [8] Z. Halim, R. Kalsoom, S. Bashir, and G. Abbas, “Artificial intelligence techniques for driving safety and vehicle crash prediction,” *Artif. Intell. Rev.*, vol. 46, no. 3, pp. 351–387, Oct. 2016, doi: 10.1007/s10462-016-9467-9.
- [9] A. P. Staff *et al.*, “An Evaluation of “Crash Prediction Networks” (CPN) for Autonomous Driving Scenarios in CARLA Simulator”.
- [10] M. Haris, M. A. Moin, F. A. Rehman, and M. Farhan, “Vehicle Crash Prediction using Vision,” in *2021 55th Annual Conference on Information Sciences and Systems (CISS)*, Baltimore, MD, USA: IEEE, Mar. 2021, pp. 1–5. doi: 10.1109/CISS50987.2021.9400257.
- [11] A. B. Parsa, R. S. Chauhan, H. Taghipour, and S. Derrible, “Applying Deep Learning to Detect Traffic Accidents in Real Time Using Spatiotemporal Sequential Data,” 2019.
- [12] S. S. Yassin and Pooja, “Road accident prediction and model interpretation using a hybrid K-means and random forest algorithm approach,” *SN Appl. Sci.*, vol. 2, no. 9, p. 1576, Aug. 2020, doi: 10.1007/s42452-020-3125-1.
- [13] E. J. Rodríguez-Seda, “Collision Avoidance Systems, Automobiles,” in *International Encyclopedia of Transportation*, Elsevier, 2021, pp. 173–179. doi: 10.1016/B978-0-08-102671-7.10121-6.
- [14] D. Lord and B. N. Persaud, “Accident Prediction Models With and Without Trend: Application of the Generalized Estimating Equations Procedure,” *Transportation Research Record*, vol. 1717, no. 1, pp. 102–108, Jan. 2000, doi: 10.3141/1717-13.
- [15] D. A. Pomerleau, “ALVINN: An Autonomous Land Vehicle in a Neural Network,” in *Advances in Neural Information Processing Systems*, Morgan-Kaufmann, 1988. Accessed: Sep. 10, 2023. [Online]. Available: <https://proceedings.neurips.cc/paper/1988/hash/812b4ba287f5ee0bc9d43bbf5bbe87fb-Abstract.html>
- [16] F.-H. Chan, Y.-T. Chen, Y. Xiang, and M. Sun, “Anticipating Accidents in Dashcam Videos,” in *Computer Vision – ACCV 2016*, vol. 10114, S.-H. Lai, V. Lepetit, K. Nishino, and Y. Sato, Eds., in Lecture Notes in Computer Science, vol.

10114. , Cham: Springer International Publishing, 2017, pp. 136–153. doi: 10.1007/978-3-319-54190-7_9.
- [17] J. G. Choi, C. W. Kong, G. Kim, and S. Lim, “Car crash detection using ensemble deep learning and multimodal data from dashboard cameras,” *Expert Systems with Applications*, vol. 183, p. 115400, Nov. 2021, doi: 10.1016/j.eswa.2021.115400.
- [18] H. Zhao, H. Cheng, T. Mao, and C. He, “Research on Traffic Accident Prediction Model Based on Convolutional Neural Networks in VANET,” in *2019 2nd International Conference on Artificial Intelligence and Big Data (ICAIBD)*, Chengdu, China: IEEE, May 2019, pp. 79–84. doi: 10.1109/ICAIBD.2019.8837020.
- [19] S. Hochreiter, “LONG SHORT-TERM MEMORY,” presented at the Neural Computation, Nov. 1997, pp. 1735–1780. doi: <https://doi.org/10.1162/neco.1997.9.8.1735>.
- [20] J. Chung, C. Gulcehre, K. Cho, and Y. Bengio, “Empirical Evaluation of Gated Recurrent Neural Networks on Sequence Modeling.” arXiv, Dec. 11, 2014. doi: 10.48550/arXiv.1412.3555.
- [21] Y. Chen, C. Dong, P. Palanisamy, P. Mudalige, K. Muelling, and J. M. Dolan, “Attention-Based Hierarchical Deep Reinforcement Learning for Lane Change Behaviors in Autonomous Driving,” in *2019 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*, Long Beach, CA, USA: IEEE, Jun. 2019, pp. 1326–1334. doi: 10.1109/CVPRW.2019.00172.
- [22] F. Marchetti, F. Becattini, L. Seidenari, and A. D. Bimbo, “Multimodal trajectory prediction in the CARLA simulator”.
- [23] M. Gao, J. Jiang, G. Zou, V. John, and Z. Liu, “RGB-D-Based Object Recognition Using Multimodal Convolutional Neural Networks: A Survey,” *IEEE Access*, vol. 7, pp. 43110–43136, 2019, doi: 10.1109/ACCESS.2019.2907071.
- [24] Y. Xiao, F. Codevilla, A. Gurram, O. Urfalioglu, and A. M. López, “Multimodal End-to-End Autonomous Driving,” *IEEE Trans. Intell. Transport. Syst.*, vol. 23, no. 1, pp. 537–547, Jan. 2022, doi: 10.1109/TITS.2020.3013234.
- [25] J. Sanchez-Riera, K.-L. Hua, Y.-S. Hsiao, T. Lim, S. C. Hidayati, and W.-H. Cheng, “A comparative study of data fusion for RGB-D based visual recognition,” *Pattern Recognition Letters*, vol. 73, pp. 1–6, Apr. 2016, doi: 10.1016/j.patrec.2015.12.006.
- [26] A. J. M. Muzahid, S. F. Kamarulzaman, M. A. Rahman, S. A. Murad, M. A. S. Kamal, and A. H. Alenezi, “Multiple vehicle cooperation and collision avoidance in automated vehicles: survey and an AI-enabled conceptual framework,” *Sci Rep*, vol. 13, no. 1, Art. no. 1, Jan. 2023, doi: 10.1038/s41598-022-27026-9.
- [27] M. Imprialou and M. Quddus, “Crash data quality for road safety research: Current state and future directions,” *Accident Analysis & Prevention*, vol. 130, pp. 84–90, Sep. 2019, doi: 10.1016/j.aap.2017.02.022.
- [28] B. Dong, X. Ma, F. Chen, and S. Chen, “Investigating the Differences of Single-Vehicle and Multivehicle Accident Probability Using Mixed Logit Model,” *Journal of Advanced Transportation*, vol. 2018, p. e2702360, Jan. 2018, doi: 10.1155/2018/2702360.
- [29] A. Dosovitskiy, G. Ros, F. Codevilla, A. Lopez, and V. Koltun, “CARLA: An Open Urban Driving Simulator,” in *Proceedings of the 1st Annual Conference on Robot Learning*, PMLR, Oct. 2017, pp. 1–16. Accessed: May 15, 2023. [Online]. Available: <https://proceedings.mlr.press/v78/dosovitskiy17a.html>

- [30] M. Dupuis, M. Strobl, and H. Grezlikowski, "OpenDRIVE 2010 and Beyond – Status and Future of the de facto Standard for the Description of Road Networks," 2010.
- [31] "Sensors reference - CARLA Simulator." Accessed: Apr. 24, 2024. [Online]. Available: https://carla.readthedocs.io/en/latest/ref_sensors/
- [32] M. Jogin, Mohana, M. S. Madhulika, G. D. Divya, R. K. Meghana, and S. Apoorva, "Feature Extraction using Convolution Neural Networks (CNN) and Deep Learning," in *2018 3rd IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT)*, Bangalore, India: IEEE, May 2018, pp. 2319–2323. doi: 10.1109/RTEICT42901.2018.9012507.
- [33] N. Shahriar, "What is Convolutional Neural Network — CNN (Deep Learning)," Medium. Accessed: Apr. 23, 2024. [Online]. Available: <https://nafizshahriar.medium.com/what-is-convolutional-neural-network-cnn-deep-learning-b3921bdd82d5>
- [34] I. S. Mohamed, "Detection and Tracking of Pallets using a Laser Rangefinder and Machine Learning Techniques," 2017. doi: 10.13140/RG.2.2.30795.69926.
- [35] F. Es-sabery, A. Hair, J. Qadir, B. Sainz de Abajo, B. Garcia-Zapirain, and I. De la Torre Díez, "Sentence-Level Classification Using Parallel Fuzzy Deep Learning Classifier," *IEEE Access*, vol. PP, pp. 1–1, Jan. 2021, doi: 10.1109/ACCESS.2021.3053917.
- [36] K. Team, "Keras documentation: Keras Applications." Accessed: Apr. 23, 2024. [Online]. Available: <https://keras.io/api/applications/>
- [37] K. Le, "An overview of VGG16 and NiN models," Medium. Accessed: Apr. 24, 2024. [Online]. Available: <https://lekhuyen.medium.com/an-overview-of-vgg16-and-nin-models-96e4bf398484>
- [38] A. G. Howard *et al.*, "MobileNets: Efficient Convolutional Neural Networks for Mobile Vision Applications." arXiv, Apr. 16, 2017. Accessed: Feb. 03, 2024. [Online]. Available: <http://arxiv.org/abs/1704.04861>
- [39] "K_04 Understanding of MobileNet - EN," 위키독스. Accessed: Apr. 24, 2024. [Online]. Available: <https://wikidocs.net/165429>
- [40] S. Bangar, "Resnet Architecture Explained," Medium. Accessed: Apr. 24, 2024. [Online]. Available: <https://medium.com/@siddheshb008/resnet-architecture-explained-47309ea9283d>
- [41] G. Huang, Z. Liu, L. van der Maaten, and K. Q. Weinberger, "Densely Connected Convolutional Networks." arXiv, Jan. 28, 2018. Accessed: Feb. 03, 2024. [Online]. Available: <http://arxiv.org/abs/1608.06993>
- [42] A. Vaswani *et al.*, "Attention is All you Need".
- [43] S. Cristina, "The Transformer Model," MachineLearningMastery.com. Accessed: Apr. 24, 2024. [Online]. Available: <https://machinelearningmastery.com/the-transformer-model/>