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Importance of Artificial Intelligence and Its Role in Future Technology

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Abstract: *Artificial Intelligence - Artificial intelligence (AI) refers to the simulation or approximation of human intelligence in machines. AI is a technology that has very long history which is actively and contineously growing and changing .AI is a technology that simulate human intelligence, allowing computer applications to learn from experience via iterative processing and algorithmic training. The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal.*

It focuses on intelligent agents, which contains devices that perceives environment and based on which takes actions in order to maximize goal success chances. In this paper, we will explain the modern AI basics and various representative applications of AI. In context of modern digitalized world, Artificial Intelligence (AI) is the property of machines, computer programs and systems to perform the intellectual and creative functions of a person, independently find ways to solve problems, be able to draw conclusions and make decisions. The recent research on AI tools, including machine learning, deep learning and predictive analysis intended toward increasing the planning, learning, reasoning, thinking and action taking ability. Based on which, the proposed research intended towards exploring on how the human intelligence differs from the artificial intelligence. In addition, on how and in what way, the current artificial intelligence is clever than the human beings. Moreover, we critically analyze what the state-of-the art AI of today is capable of doing, why it still cannot reach human level intelligence and what are the open challenges. Furthermore, it will explore the future predictions for artificial intelligence and based on which potential solution will be recommended to solve it within next decades. AI is going to add a new level of efficiency and sophistication to future technologies.

Keywords: Artificial Intelligence, Invariant Representations, Neuroscience, Strategy, Machine Learning

REFERENCES

[1] J. Shabbir and T. Anwer, "A Survey of Deep Learning Techniques for Mobile Robot Applications," ArXiv e- prints, Mar. 2018.

[2] U. Neisser, G. Boodoo, T. J. Bouchard Jr, A. W. Boykin, N. Brody, S. J. Ceci, D. F. Halpern, J. C. Loehlin, R. Perloff, R. J. Sternberg et al., "Intelligence: Knowns and unknowns." American psychologist, vol. 51, no. 2, p. 77, 1996

[3] R. Feuerstein, The Dynamic Assessment of Cognitive Modifiability: The Learning Propensity Assessment Device: Theory, Instruments and Techniques. ICELP Press, 2002. [Online]. Available: https://books.google.com.pk/books?id=- 3vsAAAAMAAJ

[4] M. Milford, C. Shen, S. Lowry, N. Suenderhauf, S. Shirazi, G. Lin, F. Liu, E. Pepperell, C. Lerma, B. Upcroft et al., "Sequence searching with deep-learnt depth for condition-and viewpointinvariant route-based place recognition," in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops, 2015, pp. 18–25.

[5] K. Fragkiadaki, S. Levine, P. Felsen, and J. Malik, "Recurrent network models for human dynamics," in Computer Vision (ICCV), 2015 IEEE International Conference on. IEEE, 2015, pp. 4346–4354.

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[6] S. Niekum, S. Osentoski, G. Konidaris, S. Chitta, B. Marthi, and A. G. Barto, "Learning grounded finite-state representations from unstructured demonstrations," The International Journal of Robotics Research, vol. 34, no. 2, pp. 131–157, 2015.
[7] C. Devin, A. Gupta, T. Darrell, P. Abbeel, and S. Levine, "Learning modular neural network policies for multi- task and multirobot transfer," in Robotics and Automation (ICRA), 2017 IEEE International Conference on. IEEE, 2017, pp. 2169–2176.
[8] C. Finn, X. Y. Tan, Y. Duan, T. Darrell, S. Levine, and P. Abbeel, "Deep spatial autoencoders for visuomotor learning," in Robotics and Automation (ICRA), 2016 IEEE International Conference on. IEEE, 2016, pp. 512– 519.
[9]A. A. Rusu, M. Vecerik, T. Rothorl, N. Heess, R. Pascanu, and ¨ R. Hadsell, "Sim-to-real robot learning from pixels with progressive nets," arXiv preprint arXiv: 1610.04286, 2016.
[10] S. Mohamed and D. J. Rezende, "Variational information maximisation for intrinsically motivated reinforcement learning," in Advances in neural information processing systems, 2015, pp. 2125– 2133.
[11] Y. Zhu, R. Mottaghi, E. Kolve, J. J. Lim, A. Gupta, L. Fei-Fei, and A. Farhadi, "Target-driven visual navigation in indoor scenes using deep reinforcement learning," in Robotics and Automation (ICRA), 2017
[12] F. Cruz, J. Twiefel, S. Magg, C. Weber, and S. Wermter, "Interactive reinforcement learning through speech guidance in a domestic scenario," in Neural Networks (IJCNN), 2015 International Joint Conference on. IEEE, 2015, pp. 1–8.
[13] A. Vinciarelli, A. Esposito, E. Andre, F. Bonin, M. Chetouani, J. F. ´ Cohn, M. Cristani, F. Fuhrmann, E. Gilmartin, Z. Hammal et al., "Open challenges in modelling, analysis and synthesis of human behaviour in human–human and human–machine interactions," Cognitive Computation, vol. 7, no. 4, pp. 397–413, 2015.