KLASIFIKASI TUMOR OTAK MENGGUNAKAN DEEP LEARNING

Dharma Hafidz Satya Nugraha 201810370311314

Bibit Pamungkas 201810370311321

Referensi Utama :

[The RSNA-ASNR-MICCAI BraTS 2021 Benchmark on Brain Tumor Segmentation and Radiogenomic Classification](https://arxiv.org/abs/2107.02314)

Dataset :

[rsna-brats-2021-2d](https://www.kaggle.com/snish9/rsnabrats20212d)

Referensi :

[1] “Sci-Hub | Deep CNN for Brain Tumor Classification. Neural Processing Letters, 53(1), 671–700 | 10.1007/s11063-020-10398-2.” https://sci-hubtw.hkvisa.net/10.1007/s11063-020-10398-2 (accessed Oct. 18, 2021).

[2] W. Ayadi, W. Elhamzi, and M. Atri, “A new deep CNN for brain tumor classification. 2020 20th International Conference on Sciences and Techniques of Automatic Control and Computer Engineering (STA) | 10.1109/STA50679.2020.9329328,” 2020, Accessed: Oct. 18, 2021. [Online]. Available: https://sci-hubtw.hkvisa.net/.

[3] S. K. Baranwal, K. Jaiswal, K. Vaibhav, A. Kumar, and R. Srikantaswamy, “Performance analysis of Brain Tumour Image Classification using CNN and SVM,” *Proc. 2nd Int. Conf. Inven. Res. Comput. Appl. ICIRCA 2020*, pp. 537–542, Jul. 2020, doi: 10.1109/ICIRCA48905.2020.9183023.

[4] S. Das, O. F. M. R. R. Aranya, and N. N. Labiba, “Brain Tumor Classification Using Convolutional Neural Network,” *1st Int. Conf. Adv. Sci. Eng. Robot. Technol. 2019, ICASERT 2019*, May 2019, doi: 10.1109/ICASERT.2019.8934603.

[5] S. Deepak and P. M. Ameer, “Automated Categorization of Brain Tumor from MRI Using CNN features and SVM,” *J. Ambient Intell. Humaniz. Comput.*, vol. 12, no. 8, pp. 8357–8369, Aug. 2021, doi: 10.1007/S12652-020-02568-W.

[6] K. S.-T. glasnik and undefined 2019, “Detection and classification of brain tumours from MRI images using faster R-CNN,” *hrcak.srce.hr*, vol. 13, pp. 337–342, 2019, doi: 10.31803/tg-20190712095507.

[7] T. V.-J. of A. Intelligence and undefined 2019, “Classification of brain cancer type using machine learning,” *irojournals.com*, vol. 01, no. 02, pp. 105–113, 2019, doi: 10.36548/jaicn.2019.2.006.

[8] I. A. El Kader, G. Xu, Z. Shuai, S. Saminu, I. J.-B. Sciences, and undefined 2021, “Differential deep convolutional neural network model for brain tumor classification,” *mdpi.com*, 2021, doi: 10.3390/brainsci11030352.

[9] N. Kaldera, S. R. Gunasekara, M. B. Dissanayake, and H. N. T. K. Kaldera, “Brain tumor Classification and Segmentation using Faster R-CNN Medical image analysis, classification and segmenation View project Molecular Communications View project Brain tumor Classification and Segmentation using Faster R-CNN,” doi: 10.1109/ICASET.2019.8714263.

[10] H. Kibriya, M. Masood, … M. N.-2021 M. A., and undefined 2021, “Multiclass Brain Tumor Classification Using Convolutional Neural Network and Support Vector Machine.,” *ieeexplore.ieee.org*, 2021, doi: 10.1109/MAJICC53071.2021.9526262.

[11] F. Özyurt, E. Sert, D. A.-M. hypotheses, and undefined 2020, “An expert system for brain tumor detection: Fuzzy C-means with super resolution and convolutional neural network with extreme learning machine,” *Elsevier*, 2019, doi: 10.1016/j.mehy.2019.109433.

[12] A. Rehman, M. A. Khan, T. Saba, Z. Mehmood, U. Tariq, and N. Ayesha, “Microscopic brain tumor detection and classification using 3D CNN and feature selection architecture,” *Microsc. Res. Tech.*, vol. 84, no. 1, pp. 133–149, Jan. 2021, doi: 10.1002/JEMT.23597.

[13] M. I. Sharif, M. A. Khan, M. Alhussein, K. Aurangzeb, and M. Raza, “A decision support system for multimodal brain tumor classification using deep learning,” *Complex Intell. Syst.*, Mar. 2021, doi: 10.1007/S40747-021-00321-0.

[14] S. Somasundaram and R. Gobinath, “Current Trends on Deep Learning Models for Brain Tumor Segmentation and Detection - A Review,” *Proc. Int. Conf. Mach. Learn. Big Data, Cloud Parallel Comput. Trends, Prespectives Prospect. Com. 2019*, pp. 217–221, Feb. 2019, doi: 10.1109/COMITCON.2019.8862209.

[15] R. Suganthe, G. Revathi, S. Monisha, R. P.-J. C. Rev, and undefined 2020, “Deep Learning Based Brain Tumor Classification Using Magnetic Resonance Imaging,” *jcreview.com*, 2019, doi: 10.31838/jcr.07.09.74.

[16] R. Thillaikkarasi and S. Saravanan, “An Enhancement of Deep Learning Algorithm for Brain Tumor Segmentation Using Kernel Based CNN with M-SVM,” *J. Med. Syst.*, vol. 43, no. 4, Apr. 2019, doi: 10.1007/S10916-019-1223-7.

[17] S. Vijh, S. Sharma, P. G.-D. visualization and Knowledge, and U. 2020, “Brain tumor segmentation using OTSU embedded adaptive particle swarm optimization method and convolutional neural network,” *Springer*, 2020, Accessed: Oct. 17, 2021. [Online]. Available: https://link.springer.com/chapter/10.1007/978-3-030-25797-2\_8.

[18] Y. Zhuge *et al.*, “Automated glioma grading on conventional MRI images using deep convolutional neural networks,” *Med. Phys.*, vol. 47, no. 7, pp. 3044–3053, Jul. 2020, doi: 10.1002/MP.14168.

[19] P. Ghosal, L. Nandanwar, … S. K.-2019 S., and U. 2019, “Brain tumor classification using ResNet-101 based squeeze and excitation deep neural network,” *ieeexplore.ieee.org*, 2019, doi: 10.1109/ICACCP.2019.8882973.

[20] H. Kaldera, … S. G.-2019 A. in, and U. 2019, “Brain tumor classification and segmentation using faster R-CNN,” *ieeexplore.ieee.org*, 2019, doi: 10.1109/ICASET.2019.8714263.

[21] H. Khan, W. Jue, M. Mushtaq, M. M.-M. B. Eng, and U. 2020, “Brain tumor classification in MRI image using convolutional neural network,” *aimspress.com*, 2020, doi: 10.3934/mbe.2020328.

[22] F. Díaz-Pernas *et al.*, “Classification of Brain Tumors Using Deep Features Extracted Using CNN To,” *J. Phys.*, 2019, doi: 10.1088/1742-6596/1172/1/012016.

[23] A. Alqudah, H. Alquraan, … I. Q. preprint arXiv, and U. 2020, “Brain Tumor Classification Using Deep Learning Technique--A Comparison between Cropped, Uncropped, and Segmented Lesion Images with Different Sizes,” *arxiv.org*, vol. 8, 2019, doi: 10.30534/ijatcse/2019/155862019.

[24] S. Basheera, M. R.-J. of P. C. Series, and U. 2019, “Classification of brain tumors using deep features extracted using CNN,” *iopscience.iop.org*, 2019, doi: 10.1088/1742-6596/1172/1/012016.

[25] R. Chelghoum, A. Ikhlef, A. Hameurlaine, and S. Jacquir, “Transfer learning using convolutional neural network architectures for brain tumor classification from MRI images,” *IFIP Adv. Inf. Commun. Technol.*, vol. 583 IFIP, pp. 189–200, 2020, doi: 10.1007/978-3-030-49161-1\_17.

[26] F. Díaz-Pernas, M. M.-Z.- Healthcare, and undefined 2021, “A deep learning approach for brain tumor classification and segmentation using a multiscale convolutional neural network,” *mdpi.com*, 2021, doi: 10.3390/healthcare9020153.