

REFERENCES

- [1] A. Almustanyir, “A Global Perspective of Color Vision Deficiency : Awareness , Diagnosis , and Lived Experiences,” pp. 1–16, 2025.
- [2] M. Elfalah *et al.*, “The Impact of Color Vision Deficiency on the Capability of Ophthalmologists to Diagnose Benign and Malignant Choroidal Tumors,” 2023.
- [3] L. Chen, Z. Zhu, W. Huang, K. Go, X. Chen, and X. Mao, “Image recoloring for color vision deficiency compensation using Swin transformer,” *Neural Comput. Appl.*, vol. 36, no. 11, pp. 6051–6066, 2024, doi: 10.1007/s00521-023-09367-2.
- [4] M. F. Costa, L. D. Henriques, and G. S. Souza, “An Integrative Review for Clinical Evaluation of Color Vision : The Right Test for the Right Disease,” pp. 355–364, 2025, doi: 10.4103/joco.joco.
- [5] G. Ketapang and I. Probolinggo, “Prevalensi Buta Warna pada Siswa Sekolah Dasar di Pulau Gili Ketapang Kabupaten Probolinggo Pendahuluan Metode,” vol. 7, pp. 69–76, 2021, doi: 10.33474/e-jbst.v7i2.453.
- [6] Z. Zhu and X. Mao, “Image recoloring for color vision deficiency compensation : a survey,” *Vis. Comput.*, vol. 37, no. 12, pp. 2999–3018, 2021, doi: 10.1007/s00371-021-02240-0.
- [7] A. P. Adyani, F. T. Anggraeny, and E. Y. Puspaningrum, “Image Color Correction for Color Vision Deficiency Using ResNet and CycleGAN,” vol. 8, no. 1, 2025, doi: 10.32877/bt.v8i1.2506.
- [8] R. S. Imagery, “U-Net Ensemble for Enhanced Semantic Segmentation in Remote Sensing Imagery,” 2024.
- [9] E. Lin, “Comparative Analysis of Pix2Pix and CycleGAN for Image-to-Image Translation,” vol. 39, pp. 915–925, 2023.
- [10] A. Fujita, M. Mukaida, T. Azetsu, and N. Suetake, “Franklin Open Hue-preserving lightness and saturation modification in RGB color space for protanopia and deuteranopia,” *Franklin Open*, vol. 9, no. June, p. 100190, 2024, doi: 10.1016/j.fraope.2024.100190.
- [11] H. Zhou, W. Huang, Z. Zhu, X. Chen, K. Go, and X. Mao, “Fast image recoloring for red – green anomalous trichromacy with contrast enhancement and naturalness preservation,” *Vis. Comput.*, vol. 40, no. 7, pp. 4647–4660, 2024, doi: 10.1007/s00371-024-03454-8.
- [12] B. A. Khan and J. Jung, “applied sciences Semantic Segmentation of Aerial Imagery Using U-Net with Self-Attention and Separable Convolutions,” 2024.
- [13] M. Liu, X. Su, X. Yao, W. Hao, and W. Zhu, “Lensless Image Restoration Based on Multi-Stage Deep Neural Networks and Pix2pix Architecture,”

2023.

- [14] M. Trigka and E. Dritsas, “A Comprehensive Survey of Deep Learning Approaches in Image Processing,” 2025.
- [15] A. Kucuk, G. D. Finlayson, R. Mantiuk, and M. Ashraf, “Performance Comparison of Classical Methods and Neural Networks for Colour Correction,” 2023.
- [16] W. L. Low, Y. W. Hau, and C. Y. Ooi, “Image Colour Correction of Smartphone-based Imaging Devices for Medical Application : A Literature Review,” no. August, pp. 136–147, 2025.
- [17] A. P. Putra, F. A. Fiolana, D. Arie, and W. Kusumastutie, “Penerapan Koreksi Warna Pada Citra Bagi Penyandang Buta Warna Parsial,” no. 38, 2021.
- [18] A. Stockman and A. T. Rider, “Formulae for generating standard and individual human cone spectral sensitivities,” no. June, pp. 818–840, 2023, doi: 10.1002/col.22879.
- [19] G. E. Tsekouras *et al.*, “A Novel Approach to Image Recoloring for Color Vision Deficiency,” *Sensor*, 2021, doi: 10.3390/s21082740.
- [20] R. Kaur, G. Karmakar, F. Xia, and M. Imran, *Deep learning : survey of environmental and camera impacts on internet of things images*, vol. 56, no. 9. Springer Netherlands, 2023. doi: 10.1007/s10462-023-10405-7.
- [21] H. Zhang, “EAI Endorsed Transactions A Review of Convolutional Neural Network Development in Computer Vision,” vol. 7, no. 28, pp. 1–11, 2022.
- [22] M. Krichen, “Convolutional Neural Networks : A Survey,” pp. 1–41, 2023.
- [23] A. Abdulfatah, Z. Sheng, and Y. E. Tenawerk, “U-Net-Based Medical Image Segmentation : A Comprehensive Analysis and Performance Review,” vol. 9, no. 1, pp. 202–208, 2025.
- [24] A. F. Ramdhani, Y. Widhiyasana, and S. Rachmat, “Comparison of U-NET and ELU-NET for Pancreatic Cancer Medical Image Semantic Segmentation,” vol. 14, no. 1, pp. 44–51, 2025.
- [25] M. Khouy, Y. Jabrane, M. Ameer, A. Hajjam, and E. Hassani, “Medical Image Segmentation Using Automatic Optimized U-Net Architecture Based on Genetic Algorithm,” 2023.
- [26] Brainwave, “U-NET : Arsitektur Deep Learning untuk Semantic Segmentation,” Medium. [Online]. Available: <https://brainwavee.medium.com/u-net-arsitektur-deep-learning-untuk-semantic-segmentation-5607fb4536c9>
- [27] ICHI.PRO, “Membuat dan melatih model U-Net dengan PyTorch untuk segmentasi semantik 2D & 3D: Pembuatan model [2/4],” ICHI.PRO. [Online]. Available: <https://ichi.pro/id/membuat-dan-melatih-model-u-net-dengan-pytorch-untuk-segmentasi-semantik-2d-3d-pembuatan-model-2-4->

117306787760226

- [28] Bharath K and Shaoni Mukherjee, “U-Net Architecture For Image Segmentation,” DigitalOcean. [Online]. Available: https://www.digitalocean.com/community/tutorials/unet-architecture-image-segmentation?utm_source=chatgpt.com
- [29] Abirami Vina, “A guide on U-Net architecture and its applications,” Ultralytics. [Online]. Available: <https://www.ultralytics.com/blog/a-guide-on-u-net-architecture-and-its-applications?>
- [30] Z. Cai, Z. Xiong, H. Xu, P. Wang, and W. E. I. Li, “Generative Adversarial Networks : A Survey Toward Private and Secure Applications,” vol. 54, no. 6, 2021, doi: 10.1145/3459992.
- [31] H. Song and J. Mugabi, “applied sciences Pix2Pix and Deep Neural Network-Based Deep Learning Technology for Predicting Vortical Flow Fields and Aerodynamic Performance of Airfoils,” pp. 0–9, 2023.
- [32] E. With and H. From, “TRANSFER LEARNING WITH PIX2PIX GAN FOR GENERATING REALISTIC PHOTOGRAPHS FROM VIEWED SKETCH ARTS,” *J. Southwest Jiaotong Univ.*, 2022, doi: <https://doi.org/10.35741/issn.0258-2724.57.4.17>.
- [33] Deepayan Chakraborty and Adway Mitra, “Simulation of global sea surface temperature maps using Pix2Pix GAN,” *Environ. Data Sci.*, vol. 6, pp. 1–11, 2025, doi: 10.1017/eds.2024.38.
- [34] A. Pca, I. P. Sari, F. Ramadhani, A. Satria, and D. Apdilah, “Implementasi Pengolahan Citra Digital dalam Pengenalan Wajah menggunakan,” 2023.
- [35] D. Septhya, Rahmaddeni, Susanti, and Agustin, “Penerapan Algoritma Convolutional Neural Network Untuk Klasifikasi Penyakit Kanker Kulit,” *Indones. J. Comput. Sci.*, vol. 13, no. 4, pp. 6590–6600, 2024, doi: 10.33022/ijcs.v13i4.4262.
- [36] M. Fauzan Novriandy, B. Rahmat, and A. Junaidi, “Klasifikasi Citra Penyakit Kanker Mulut Menggunakan Arsitektur Resnet50 Optimasi Adam Dan Sgd,” *J. Inform. dan Tek. Elektro Terap.*, vol. 12, no. 3, 2024, doi: 10.23960/jitet.v12i3.4732.
- [37] F. Hasan, Y. W. Sani, S. Nicholas, and F. T. Anggraeny, “Evaluasi Kualitas Citra Rontgen Dada Menggunakan PSNR dan MSE Setelah Penerapan Teknik Peningkatan Citra,” pp. 203–214.
- [38] J. Sun, W. Cao, and T. Yamanaka, “JustDeepIt : Software tool with graphical and character user interfaces for deep learning- based object detection and segmentation in image analysis,” no. October, 2022, doi: 10.3389/fpls.2022.964058.
- [39] A. Sabet, K. Amin, M. M. Hadhoud, and M. Ibrahim, “Hybrid DenseNet-UNet Model for Accurate Liver Segmentation in CT images,” vol. 12, pp. 85–101, 2025.

- [40] sakshivyavahare20, “Color Blindness Simulation & Correction,” kaggle. [Online]. Available: <https://www.kaggle.com/datasets/sakshivyavahare20/color-blindness-simulation-and-correction?>
- [41] Y. Shao *et al.*, “An Improvement of Adam Based on a Cyclic Exponential Decay Learning Rate and Gradient Norm Constraints,” 2024.