

DAFTAR PUSTAKA

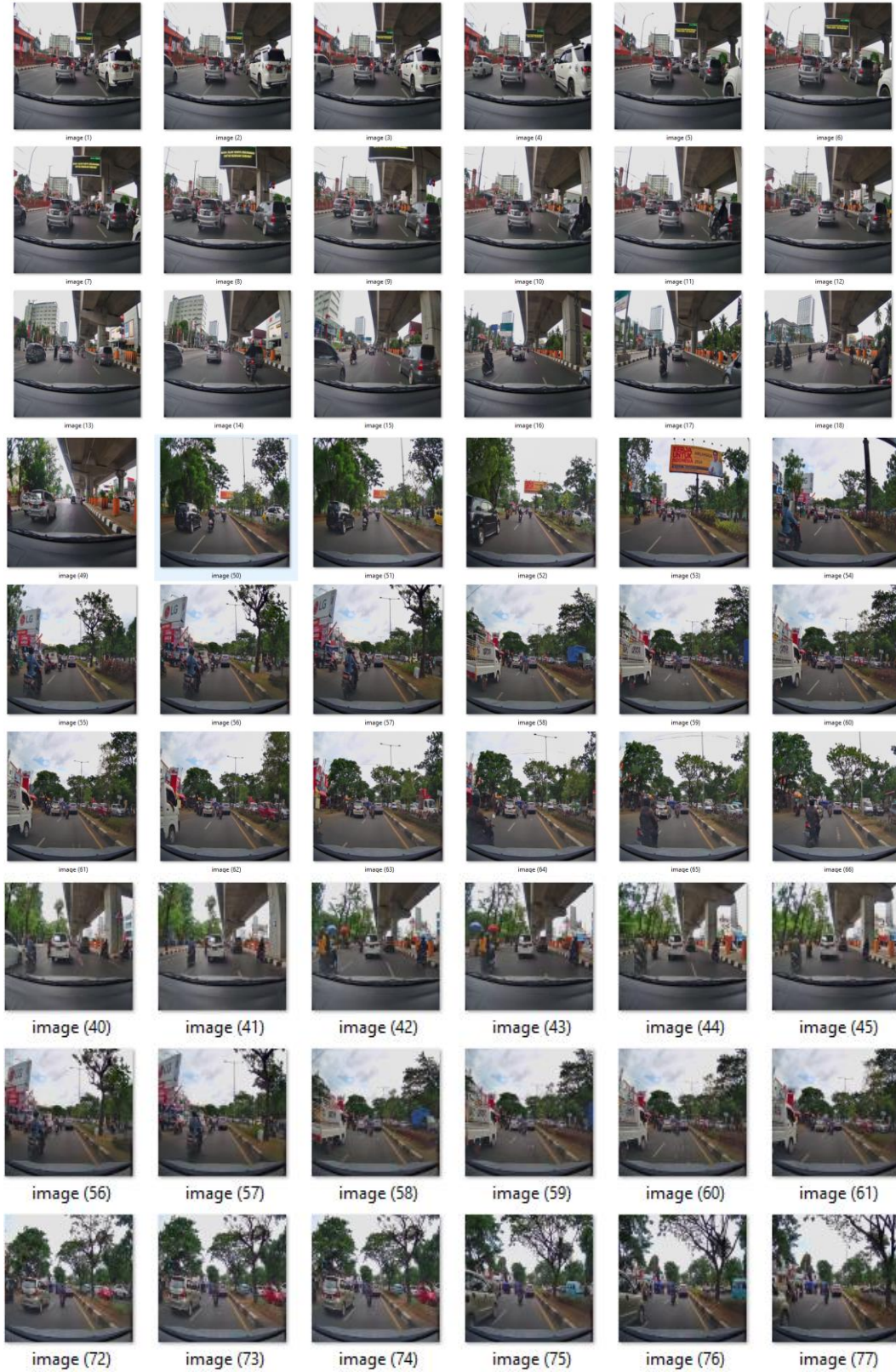
- Anderson, J. M., Kalra, N., Stanley, K. D., Sorensen, P., Samaras, C., & Oluwatola, O. A. (2014). *Autonomous vehicle technology: A guide for policymakers*. Rand Corporation.
- ANHAR, A., & PUTRA, R. A. (2023). Perancangan dan Implementasi Self-Checkout System pada Toko Ritel menggunakan *Convolutional Neural Network (CNN)*. *ELKOMIKA: Jurnal Teknik Energi Elektrik, Teknik Telekomunikasi, & Teknik Elektronika*, 11(2), 466. <https://doi.org/10.26760/elkomika.v11i2.466>
- Aningtiyas, P. R., Sumin, A., & Wirawan, S. (2020). Pembuatan Aplikasi Deteksi Objek Menggunakan TensorFlow Object Detection API dengan Memanfaatkan SSD MobileNet V2 Sebagai Model Pra-Terlatih: Array. *Jurnal Ilmiah Komputasi*, 19(3), 421–430.
- Atif, N., Bhuyan, M., & Ahamed, S. (2019). A Review on Semantic Segmentation from a Modern Perspective. *2019 International Conference on Electrical, Electronics and Computer Engineering (UPCON)*, 1–6. <https://doi.org/10.1109/UPCON47278.2019.8980189>
- AUTONOMOUS CAR. (n.d.). Retrieved March 25, 2024, from <https://socs.binus.ac.id/2018/12/06/autonomous-car/>
- Azmi, K., Defit, S., & Sumijan, S. (2023). Implementasi *Convolutional Neural Network (CNN)* Untuk Klasifikasi Batik Tanah Liat Sumatera Barat. *JURNAL UNITEK*, 16(1), Article 1. <https://doi.org/10.52072/unitek.v16i1.504>
- Balasubramaniam, A., & Pasricha, S. (2022). *Object Detection in Autonomous Vehicles: Status and Open Challenges* (arXiv:2201.07706). arXiv. <https://doi.org/10.48550/arXiv.2201.07706>
- Basuki, L. F. (2016). Implementasi metode histogram of oriented gradients dengan optimasi algoritma Frei-Chen untuk deteksi citra manusia. *Universitas Komputer Indonesia, Bandung*.
- Bonnefon, J.-F., Shariff, A., & Rahwan, I. (2016). The social dilemma of autonomous vehicles. *Science*, 352(6293), 1573–1576. <https://doi.org/10.1126/science.aaf2654>
- Carneiro, G., Mateus, D., Peter, L., Bradley, A., Tavares, J. M. R., Belagiannis, V., Papa, J. P., Nascimento, J. C., Loog, M., & Lu, Z. (2016). *Deep learning and data labeling for medical applications*.
- Carreira, J., & Sminchisescu, C. (2011). CPMC: Automatic object segmentation using constrained parametric min-cuts. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 34(7), 1312–1328.
- Grandini, M., Bagli, E., & Visani, G. (2020, August 13). *Metrics for Multi-Class Classification: An Overview*. arXiv.Org. <https://arxiv.org/abs/2008.05756v1>
- Hadinata, P. N., Simanta, D., Eddy, L., & Nagai, K. (2021). Crack Detection on Concrete Surfaces Using Deep *Encoder-Decoder Convolutional Neural Network*: A Comparison Study Between U-Net and DeepLabV3+. *Journal of the Civil Engineering Forum*, 7(3), 323. <https://doi.org/10.22146/jcef.65288>

- Hidayat, A., Darusalam, U., & Irmawati, I. (2019). DETECTION OF DISEASE ON CORN PLANTS USING *CONVOLUTIONAL* NEURAL NETWORK METHODS. *Jurnal Ilmu Komputer Dan Informasi*, 12(1), Article 1. <https://doi.org/10.21609/jiki.v12i1.695>
- Huang, S.-Y., Hsu, W.-L., Hsu, R.-J., & Liu, D.-W. (2022). Fully Convolutional Network for the Semantic Segmentation of Medical Images: A Survey. *Diagnostics*, 12(11), 2765. <https://doi.org/10.3390/diagnostics12112765>
- Hussain, R., & Zeadally, S. (2019). Autonomous Cars: Research Results, Issues, and Future Challenges. *IEEE Communications Surveys & Tutorials*, 21(2), 1275–1313. <https://doi.org/10.1109/COMST.2018.2869360>
- Indrabayu, I., Prayogi, A. A., Areni, I. S., Bustamin, A., & Azqalani, N. (2023). Real-time lane departure warning with cascade lane segmentation. *Indonesian Journal of Electrical Engineering and Computer Science*, 32(2), 994. <https://doi.org/10.11591/ijeecs.v32.i2.pp994-1003>
- Kohavi, R., & Provost, F. (1998, January). (PDF) *Glossary of Terms*. https://www.researchgate.net/publication/200473546_Glossary_of_Terms
- Liu, K., Kang, G., Zhang, N., & Hou, B. (2018). Breast Cancer Classification Based on Fully-Connected Layer First Convolutional Neural Networks. *IEEE Access*, 6, 23722–23732. <https://doi.org/10.1109/ACCESS.2018.2817593>
- Long, J., Shelhamer, E., & Darrell, T. (2015). *Fully Convolutional Networks for Semantic Segmentation*. 3431–3440. https://openaccess.thecvf.com/content_cvpr_2015/html/Long_Fully_Convolutional_Networks_2015_CVPR_paper.html
- Noori, A., Shaker, S., & Azeez, R. A. (2022). Street Scene understanding via Semantic Segmentation Using Deep Learning. *Engineering and Technology Journal*, 40(4), 588–594. <https://doi.org/10.30684/etj.v40i4.2120>
- Ohta, Y., Kanade, T., & Sakai, T. (1978). *An analysis system for scenes containing objects with substructures*. 752–754.
- Ronneberger, O., Fischer, P., & Brox, T. (2015). *U-Net: Convolutional Networks for Biomedical Image Segmentation*. <https://arxiv.org/abs/1505.04597>
- Sagala, L. O. A. (2022). *Klasifikasi Cats dan Dogs*.
- Sohail, A., Nawaz, N. A., Shah, A. A., Rasheed, S., Ilyas, S., & Ehsan, M. K. (2022). A Systematic Literature Review on Machine Learning and Deep Learning Methods for Semantic Segmentation. *IEEE Access*, 10, 134557–134570. <https://doi.org/10.1109/ACCESS.2022.3230983>
- Sugirtha, T., & Sridevi, M. (2022). Semantic Segmentation using Modified U-Net for Autonomous Driving. *2022 IEEE International IOT, Electronics and Mechatronics Conference (IEMTRONICS)*, 1–7. <https://doi.org/10.1109/IEMTRONICS55184.2022.9795710>
- Wang, S., Zhang, C., & Wu, M. (2020). Accurate Semantic Segmentation in Remote Sensing Image. *Proceedings of the 2019 8th International Conference on Computing and Pattern Recognition*, 173–178. <https://doi.org/10.1145/3373509.3373535>
- Wathani, M. R., & Hidayati, N. (2023). Analisis Perbandingan Fungsi Aktivasi CNN Pada Pengelompokan Jenis Beras Berdasarkan Mutu Beras. *Brahmana: Jurnal Penerapan Kecerdasan Buatan*, 4(2), 144–153.

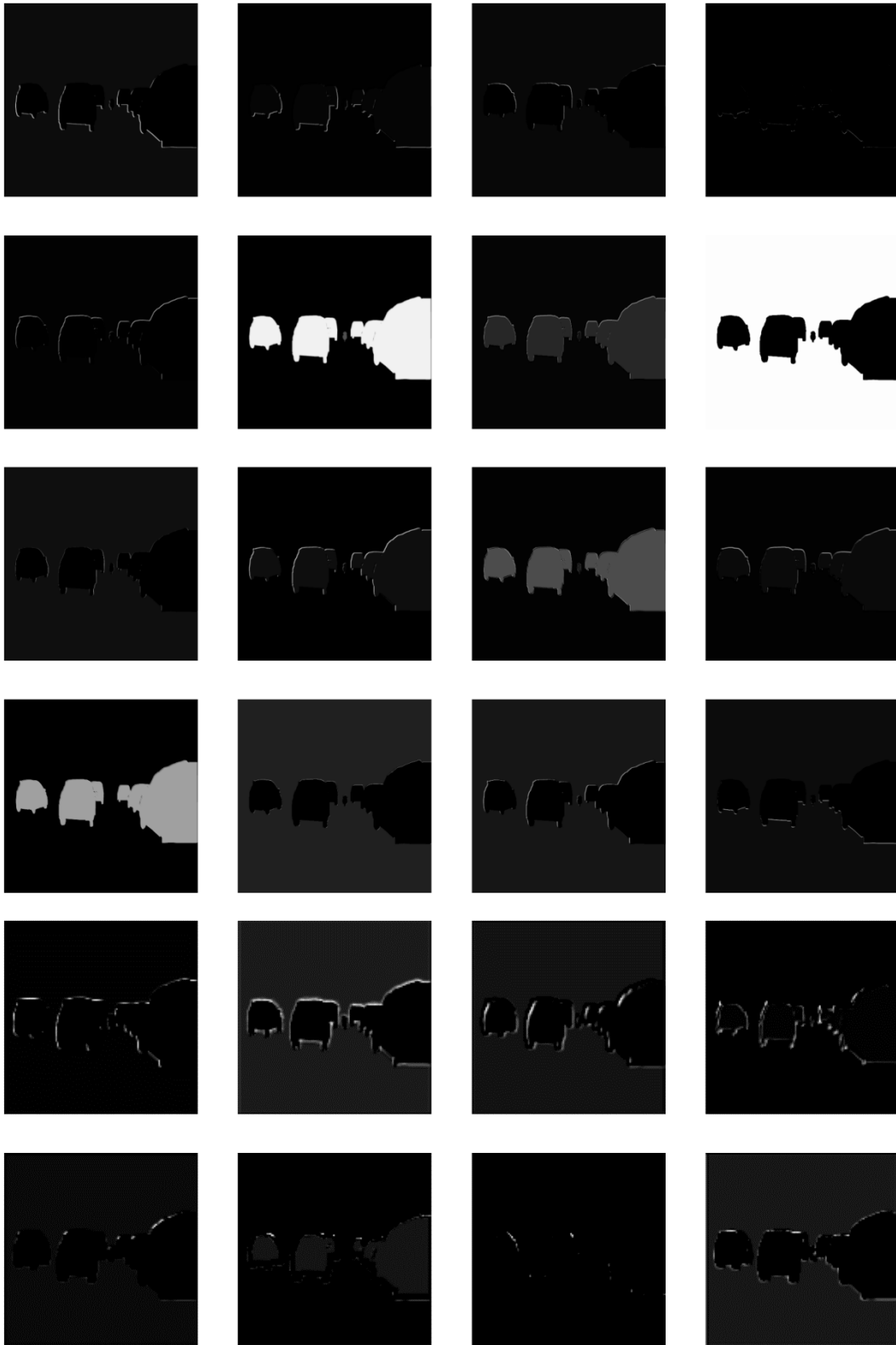
- Xu, G., Li, J., Gao, G., Lu, H., Yang, J., & Yue, D. (2023). *Lightweight Real-time Semantic Segmentation Network with Efficient Transformer and CNN* (arXiv:2302.10484). arXiv. <http://arxiv.org/abs/2302.10484>
- Yu, H., Yang, Z., Tan, L., Wang, Y., Sun, W., Sun, M., & Tang, Y. (2018). Methods and datasets on semantic segmentation: A review. *Neurocomputing*, 304, 82–103. <https://doi.org/10.1016/j.neucom.2018.03.037>
- Yu, J., Xu, J., Chen, Y., Li, W., Wang, Q., Yoo, B., & Han, J.-J. (2021). Learning Generalized *Intersection over union* for Dense Pixelwise Prediction. *Proceedings of the 38th International Conference on Machine Learning*, 12198–12207. <https://proceedings.mlr.press/v139/yu21e.html>
- Zhuang, J., Yang, J., Gu, L., & Dvornek, N. (2019). ShelfNet for Fast Semantic Segmentation. *2019 IEEE/CVF International Conference on Computer Vision Workshop (ICCVW)*, 847–856. <https://doi.org/10.1109/ICCVW.2019.00113>

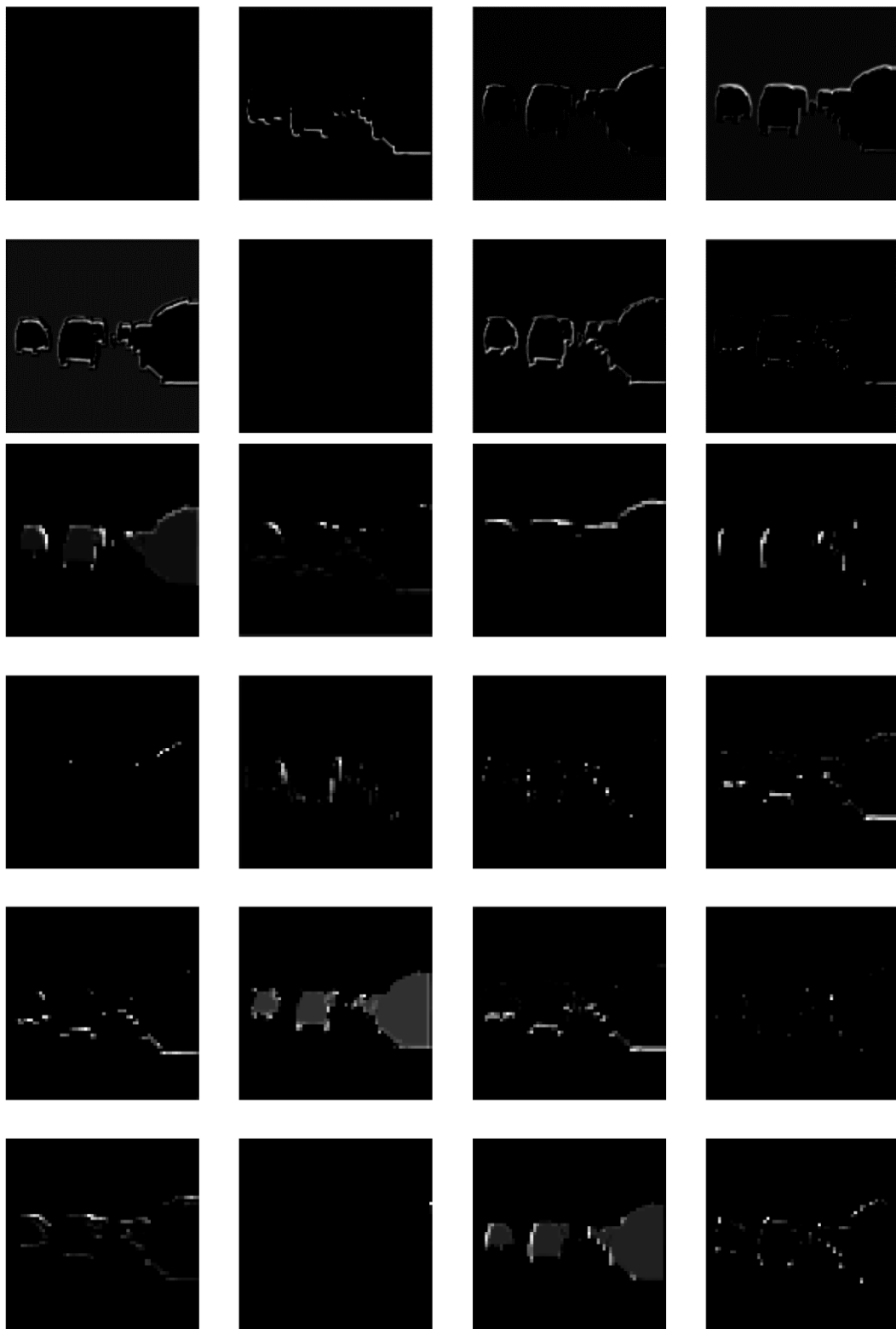
LAMPIRAN

1. Contoh Dataset



2. Contoh Hasil Feature Map Arsitektur Modifikasi U-Net





3. Perhitungan Jarak Deteksi berdasarkan Hasil Segmentasi

Perhitungan Jarak Deteksi Berdasarkan Piksel

Ukuran tinggi actual mobil 160 cm
 Ukuran tinggi piksel mobil 107 px

$$Skala = \frac{Tinggi\ aktual}{Tinggi\ Piksel} = \frac{160}{107} = 1,5$$
 Tinggi piksel dari bawah hingga ke mobil 193 px

$$Jarak\ mobil = 193 \times 1,5 = 289,5\ cm$$

Ukuran tinggi actual motor 50 cm
 Ukuran tinggi piksel motor 29 px

$$Skala = \frac{Tinggi\ aktual}{Tinggi\ Piksel} = \frac{50}{29} = 1,72$$
 Tinggi piksel dari bawah hingga ke motor 232 px

$$Jarak\ motor = 232 \times 1,72 = 3,99\ m$$

