

## DAFTAR PUSTAKA

- [1] B. Talarosha, "Menciptakan Kenyamanan Termal dalam Bangunan," *Jurnal Sistem Teknik Industri*, vol. 6, no. 3, pp. 148-158, 2005.
- [2] K. Parsons, *Human Thermal Environments: The Effects of Hot, Moderate, and Cold Environments on Human Health, Comfort, and Performance*, Third Edition, Boca Raton: CRC Press Taylor & Francis Group, 2002.
- [3] L. Pérez-Lombard, J. Ortiz and C. Pout, "A Review on Buildings Energy Consumption Information," *Energy and Buildings*, vol. 40, no. 3, pp. 394-398, 2008.
- [4] W. W. Che, C. Y. Tso, L. Sun, D. Y. K. Ip, H. Lee, C. Y. H. Chao and A. K. H. Lau, "Energy Consumption, Indoor Thermal Comfort and Air Quality in a Commercial Office with Retrofitted Heat, Ventilation and Air Conditioning (HVAC) System," *Energy and Buildings*, vol. 201, pp. 202-215, 2019.
- [5] ASHRAE, "Thermal Environmental Conditions for Human Occupancy," *American Society of Heating, Refrigerating, and Air Conditioning Engineers (ANSI/ASHRAE Standard 55-2017)*, 2017.
- [6] O. H. Koenigsberger, T. G. Ingersoll, A. Mayhew and S. V. Szokolay, *Manual of Tropical Housing and Building: Climate Design*, Hyderabad: Orient Blackswan Private Limited, 2013.
- [7] ISO, "Moderate Thermal Environments-Determination of the PMV and PPD Indices and Specification of the Conditions for Thermal Comfort, Second Edition," *International Organization for Standardization (ISO) 7730*, 1994.
- [8] A. Ghahramani, G. Castro, S. A. Karvigh and B. Becerick-Gerber, "Towards Unsupervised Learning of Thermal Comfort Using Infrared Thermography," *Applied Energy*, vol. 211, pp. 41-49, 2018.
- [9] Z. Wang, H. Onodera and R. Matsushashi, "Proposal of Relative Thermal Sensation: Another Dimension of Thermal Comfort and Its Investigation," *IEEE Access*, vol. 9, pp. 36266-36281, 2021.
- [10] P. O. Fanger, *Analysis and Applications in Environmental Engineering*, Danish Technology Press, 1970.
- [11] A. Aryal and B. Becerick-Gerber, "A Comparative Study of Predicting Individual Thermal Sensation and Satisfaction Using Wrist-Worn Temperature Sensor, Thermal Camera and Ambient Temperature Sensor," Sonny Astani Dept. of Civil and Environmental Engineering, Viterbi School of Engineering, University of Southern California, Los Angeles.
- [12] R. J. de Dear and G. S. Brager, "Developing an Adaptive Model of Thermal Comfort and Preference," *ASHRAE Transactions*, vol. 104, no. 1, pp. 1-18, 1998.
- [13] M. A. Humphreys and J. F. Nicol, "The Validity of ISO-PMV for Predicting Comfort Votes in Everyday Thermal Environments," *Energy and Buildings*, vol. 34, no. 6, pp. 667-684, 2002.
- [14] T. Cheung, S. Schiavon, T. Parkinson and P. B. G. Li, "Analysis of the accuracy on PMV – PPD Model Using the ASHRAE Global Thermal



- Comfort Database II," *Building and Environment*, vol. 153, pp. 205-217, 2019.
- [15] A. A. Farhan, K. Pattipati, B. Wang and P. Luh, "Predicting Individual Thermal Comfort using Machine Learning Algorithms," in *IEEE International Conference on Automation Science and Engineering (CASE)*, Gothenberg, 2015.
- [16] G. Gao, J. Li and Y. Wen, "Energy-Efficient Thermal Comfort Control in Smart Buildings via Deep Reinforcement Learning," *ArXiv Systems and Controls*, vol. arXiv:1901.04693, 2019.
- [17] S. Lu, W. Wang, C. Lin and E. C. Hameen, "Data-Driven Simulation of A Thermal Comfort-Based Temperature Set-Point Control with ASHRAE RP884," *Building and Environment*, vol. 156, pp. 137-146, 2019.
- [18] T. Chaudhuri, Y. C. Soh, H. Li and L. Xie, "Machine Learning Based Prediction of Thermal Comfort in Buildings of Equatorial Singapore," in *2017 IEEE International Conference on Smart Grid and Smart Cities*, Singapore, 2017.
- [19] F. H. M. Salleh, M. B. Saripuddin and R. B. Omar, "Predicting Thermal Comfort of HVAC Building Using 6 Thermal Factors," in *2020 8th International Conference on Information Technology and Multimedia (ICIMU)*, Selangor, 2020.
- [20] F. R. D. Alfano, B. W. Olesen, B. I. Palella, D. Pepe and G. Riccio, "Fifty Years of PMV Model: Reliability, Implementation and Design of Software for Its Calculation," *Atmosphere*, vol. 11, no. 1, pp. 1-14, 2020.
- [21] S. Torresin, G. Pernigotto, F. Cappelletti and A. Gasparella, "Combined Effects of Environmental Factors on Human Perception and Objective Performance: A Review of Experimental Laboratory Works," *INDOOR AIR International Journal of Indoor Environment and Health*, vol. 28, no. 4, pp. 525-538, 2018.
- [22] N. Morresi, S. Casaccia, M. Sorcinelli, M. Arnesano, A. Uriarte, J. I. Torrens-Galdiz and G. M. Revel, "Sensing Physiological and Environmental Quantities to Measure Human Thermal Comfort Through Machine Learning Techniques," *IEEE Sensors Journal*, vol. 21, no. 10, pp. 12322-12337, 2021.
- [23] K. N. Nkurikiyeyezu, Y. Suzuki, Y. Tobe, G. F. Lopez and K. Itao, "Heart Rate Variability as an Indicator of Thermal Comfort State," in *Proceedings of the SICE Annual Conference, IEEE*, Kanazawa, 2017.
- [24] W. Wu and J. Lee, "Improvement of HRV Methodology for Positive/Negative Emotion Assessment," in *5th International ICST Conference on Collaborative Computing: Networking, Applications, Worksharing*, 2009.
- [25] A. Basu, A. Routray, S. Shit and A. K. Deb, "Human Emotion Recognition from Facial Thermal Image based on Fused Statistical Feature and Multi-Class SVM," in *2015 Annual IEEE India Conference (INDICON)*, New Delhi, 2015.
- [26] M. A. B. Prakusa, "Rancang Bangun Sistem Identifikasi Emosi berdasarkan Citra Kamera Termal dengan Metode Klasifikasi Convolutional Neural Network untuk Instrumentasi Pengukuran Psikoterapi," Departemen Teknik



Nuklir dan Teknik Fisika, Fakultas Teknik Universitas Gadjah Mada, Yogyakarta, 2021.

- [27] J. Lee, Y. An, M. Kim and S. Pan, "Comparison of CNN Architecture for Thermal Face Emotion Classification," in *2021 IEEE International Conference on Consumer Electronics-Asia (ICCE-Asia)*, Gangneung, 2021.
- [28] S. Rooj, U. Antesh, S. Bhattacharya, A. Routray and M. K. Mandal, "Emotion Classification of Facial Thermal Images using Sparse Coded Filters," in *46th Annual Conference of The IEEE Industrial Electronics Society (IECON)*, Singapore, 2020.
- [29] L. F. Barrett, R. Adolphs, S. Marsella, A. M. Martinez and S. D. Pollak, "Emotional Expressions Reconsidered: Challenges to Inferring Emotion From Human Facial Movements," *Sage Journals Psychological Science in the Public Interest*, vol. 20, no. 1, pp. 1-68, 2019.
- [30] A. Merla and G. L. Romani, "Thermal Signatures of Emotional Arousal: A Functional Infrared Imaging Study," in *29th Annual International Conference of The IEEE Engineering in Medicine and Biology Society*, 2007.
- [31] J. Kannala and E. Rahtu, "BSIF: Binarized Statistical Image Features," in *IEEE Proceedings of The 21st International Conference on Pattern Recognition (ICPR2012)*, Tsukuba, 2012.
- [32] B. Kadioglu and S. Toy, "Indoor Thermal Comfort: Definition, Applications and Turkey Cases," in *5th International Conference on Advances in Natural and Applied Science Engineering*, Turkey, 2021.
- [33] H. Salur, "Thermal Comfort Analysis for Courtyard Buildings: The Case of Kayseri Kosk Madrasa," Graduate School of Natural and Applied Sciences M. Sc. Thesis, Erciyes University, Kayseri, 2016.
- [34] E. A. Locke, The Nature and Causes of Job Satisfaction. In Dunnette, M.D (ed.) *Handbook of Industrial and Organisational Psychology*, Chicago: Rand McNally, 1976.
- [35] E. Eyiah-Botwe, "Assessing Housing Project End-users Satisfaction in Ghana: A Case Study of SSNIT Housing Flats in Asuoyeboah-Kumasi," *Journal of Civil Environmental Research*, vol. 7, no. 3, 2015.
- [36] L. J. Geise and A. J. Cote, "Academy of Marketing Science Review," *Academy of Marketing Science*, vol. 2000, no. 1, 2000.
- [37] Y. Houdas and E. F. J. Ring, *Human Body Temperature: Its Measurement and Regulation*, Springer Science & Business Media, 2013.
- [38] J. Lucas, "What Is Infrared? | Live Science," Live Science, 28 Februari 2019. [Online]. Available: <https://www.livescience.com/50260-infrared-radiation.html>. [Accessed 15 Mei 2022].
- [39] G. Elert, "Radiation," The Physics Hypertextbook, [Online]. Available: <https://physics.info/radiation/>. [Accessed 16 Mei 2022].
- [40] E. A. Arens and H. Zhang, *The skin's role in human thermoregulation and comfort from Thermal and Moisture Transport in Fibrous Materials*, Berkeley: Woodhead Publishing Ltd., 2006.
- [41] J. H. Choi and D. Yeom, "Development of The Data-Driven Thermal Satisfaction Prediction Model as a Function of Human Physiological



- Responses in a Built Environment," *Building and Environment*, vol. 150, pp. 206-218, 2019.
- [42] B. Pavlin, G. Pernigotto, F. Cappelletti, P. Bison, R. Vidoni and A. Gasparella, "Real-Time Monitoring of Occupants' Thermal Comfort through Infrared Imaging: A Preliminary Study," *Buildings*, vol. 7, no. 10, pp. 1-11, 2017.
- [43] "How Do Thermal Cameras Work?," FLIR TELEDYNE, 16 Juni 2020. [Online]. Available: <https://www.flir.com/discover/rd-science/how-do-thermal-cameras-work/>. [Accessed 15 Mei 2022].
- [44] "Thermal Cameras," INCATEX, [Online]. Available: <http://www.incatex.ee/en/termokaamerad-3/>. [Accessed 15 Mei 2022].
- [45] "Thermal Imaging Camera," Omega, [Online]. Available: <https://www.omega.com/en-us/resources/thermal-imagers>. [Accessed 15 Mei 2022].
- [46] "What Is Infrared Thermography?," Noria Reliable Plant, [Online]. Available: <https://www.reliableplant.com/infrared-thermography-31572>. [Accessed 16 Mei 2022].
- [47] "Understanding the Three Types of Infrared Cameras," Facilitiesnet, [Online]. Available: <https://www.facilitiesnet.com/equipmentrentaltools/article/Understanding-the-Three-Types-of-Infrared-Cameras—10652>. [Accessed 15 Mei 2022].
- [48] "How to Choose a Thermal Camera?," Omega, [Online]. Available: <https://www.omega.com/en-us/resources/how-to-choose-thermal-imagers>. [Accessed 15 Mei 2022].
- [49] R. Gonzales, *Digital Image Processing*, New York: Pearson, 2018.
- [50] "The Computer Vision Pipeline Part 2: Input Images," Manning Free Content Center, 16 Mei 2019. [Online]. Available: <https://freecontent.manning.com/the-computer-vision-pipeline-part-2-input-images/>. [Accessed 16 Mei 2022].
- [51] "Student Notes: Convolutional Neural Networks (CNN) Introduction," IndoML, [Online]. Available: <https://indoml.com/2018/03/07/student-notes-convolutional-neural-networks-cnn-introduction/>. [Accessed 23 Mei 2022].
- [52] P. Hidayatullah, *Pengolahan Citra Digital Teori dan Aplikasi Nyata*, First Edition, Bandung: Informatika, 2017.
- [53] W. Budiharto and D. Suharto, *Artificial Intelligence Konsep Dan Penerapannya*, Edisi Pertama, Yogyakarta: Penerbit Andi, 2014.
- [54] M. R. Rasyid, Z. Tahir and Syafaruddin, "Pengolahan Citra Digital untuk Mendeteksi Kesalahan Kerja Mesin Industri dengan Metode Learning Vector Quantization," *Jurnal Pekommas*, vol. 4, no. 2, pp. 131-136, 2019.
- [55] Y. Dodge, *The Oxford Dictionary of Statistical Terms*, Oxford: Oxford University Press, 2003.
- [56] J. R. Taylor, *An Introduction to Error Analysis: The Study of Uncertainties in Physical Measurements*, Second Edition, Sausalito: University Science Books, 1999.



- [57] S. Smriti, "Machine Learning: What is Mean Squared Error, Mean Absolute Error, Root Mean Squared Error and R Squared?," StudyTonight.com, 10 Agustus 2021. [Online]. Available: <https://www.studytonight.com/post/what-is-mean-squared-error-mean-absolute-error-root-mean-squared-error-and-r-squared>. [Accessed 18 Mei 2022].
- [58] D. Kurniawan, "Regresi Linier (Linear Regression)," in *A Language and Environment for Statistical Computing, R Foundation for Statistical Computing*, Vienna, 2008.
- [59] R. A. Johnson and D. W. Wichern, *Applied Multivariate Statistical Analysis*, Sixth Edition, New Jersey: Prentice Hall, 2007.
- [60] D. H. Maulud and A. M. Abdulazeez, *A Review on Linear Regression Comprehensive in Machine Learning*, 2020.
- [61] Aalen, "A Linear Regression Model for The Analysis of Life Times, Statistics in Medicine," Wiley Online Library, [Online]. Available: <https://onlinelibrary.wiley.com/doi/abs/10.1002/sim.4780080803>. [Accessed 16 Mei 2022].
- [62] "Machine Learning," Amazon, [Online]. Available: <https://docs.aws.amazon.com/machine-learning/latest/dg/model-fit-underfitting-vs-overfitting.html>. [Accessed 22 Mei 2022].
- [63] J. R. Lawendatu, J. S. Kekenusa and D. Hatidja, *Regresi Linier Berganda Untuk Menganalisis Pendapatan Petani Pala*, 2014.
- [64] Y. Heryadi and T. Wahyono, *Dasar-Dasar Deep Learning dan Implementasinya*, Yogyakarta: Gava Media, 2021.
- [65] R. Primartha, *Algoritma Machine Learning*, Bandung: Informatika, 2021.
- [66] P. Ratan, "What is the Convolutional Neural Network Architecture?," Analytics Vidhya, 14 Januari 2021. [Online]. Available: <https://www.analyticsvidhya.com/blog/2020/10/what-is-the-convolutional-neural-network-architecture/>. [Accessed 22 Mei 2022].
- [67] Z. Gao, Y. Zhang and Y. Li, "Extracting Features from Infrared Images Using Convolutional Neural Networks and Transfer Learning," *Infrared Physics and Technology*, vol. 105, pp. 1-7, 2020.
- [68] Y. Zheng, C. Yang and A. Merkulov, "Breast Cancer Screening Using Convolutional Neural Network and Follow-up Digital Mammography," in *Proceeding SPIE 10669, Computational Imaging III*, Orlando, 2018.
- [69] D. P. Kingma and J. Ba, "Adam: A Method for Stochastic Optimization," in *3rd International Conference on Learning Representations (ICLR)*, San Diego, 2015.
- [70] ISO, "Ergonomics Of The Thermal Environment: Estimation Of Thermal Insulation And Water Vapour Resistance Of A Clothing Ensemble," *International Organization of Standarizations (ISO/GSO)*, 2016.
- [71] K. Simonyan and A. Zisserman, "Very Deep Convolutional Networks for Large-scale Image Recognition," *Computing Research Repository (CoRR)*, vol. abs/1409.1556, 2014.



- [72] M. Mateen, J. Wen, S. Song and Z. Huang, "Fundus Image Classification using VGG-19 Architecture with PCA and SVD," *Symmetry Journal*, vol. 11, no. 1, 2019.
- [73] T. Carvalho, E. R. De Rezende, M. T. Alves, F. K. Balieiro and R. B. Sovat, "Exposing Computer Generated Images by Eye's Region Classification via Transfer Learning of VGG-19 CNN," in *16th IEEE International Conference on Machine Learning and Applications (ICMLA)*, Cancun, 2017.

