Daftar Pustaka

[1] V. Loftness, B. Hakkinen, O. Adan, and A. Nevalainen, “Elements That Contribute to Healthy Building Design,” *Environ. Health Perspect.*, vol. 115, no. 6, pp. 965–970, Jun. 2007, doi: 10.1289/ehp.8988.

[2] S. Navaratnam, K. Nguyen, K. Selvaranjan, G. Zhang, P. Mendis, and L. Aye, “Designing Post COVID-19 Buildings: Approaches for Achieving Healthy Buildings,” *Buildings*, vol. 12, no. 1, Art. no. 1, Jan. 2022, doi: 10.3390/buildings12010074.

[3] R. M. S. F. Almeida, V. P. de Freitas, and J. M. P. Q. Delgado, “Indoor Environmental Quality,” in *School Buildings Rehabilitation: Indoor Environmental Quality and Enclosure Optimization*, R. M. S. F. Almeida, V. P. de Freitas, and J. M. P. Q. Delgado, Eds., in SpringerBriefs in Applied Sciences and Technology. Cham: Springer International Publishing, 2015, pp. 5–17. doi: 10.1007/978-3-319-15359-9_2.

[4] S. Zuhaib, R. Manton, C. Griffin, M. Hajdukiewicz, M. M. Keane, and J. Goggins, “An Indoor Environmental Quality (IEQ) assessment of a partially-retrofitted university building,” *Build. Environ.*, vol. 139, pp. 69–85, Jul. 2018, doi: 10.1016/j.buildenv.2018.05.001.

[5] V. V. Tran, D. Park, and Y.-C. Lee, “Indoor Air Pollution, Related Human Diseases, and Recent Trends in the Control and Improvement of Indoor Air Quality,” *Int. J. Environ. Res. Public. Health*, vol. 17, no. 8, p. 2927, Apr. 2020, doi: 10.3390/ijerph17082927.

[6] S. C. Sekhar and H. C. Willem, “Impact of airflow profile on indoor air quality—a tropical study,” *Build. Environ.*, vol. 39, no. 3, pp. 255–266, Mar. 2004, doi: 10.1016/j.buildenv.2003.09.003.

[7] S. Tham, R. Thompson, O. Landeg, K. A. Murray, and T. Waite, “Indoor temperature and health: a global systematic review,” *Public Health*, vol. 179, pp. 9–17, Feb. 2020, doi: 10.1016/j.puhe.2019.09.005.

[8] S. Efthymiopoulos, H. Altamirano, and Y. D. Aktas, “The effect of the airflow pattern inside air gaps on the assessment of interstitial mould: A theoretical approach,” *Build. Serv. Eng. Res. Technol.*, vol. 42, no. 6, pp. 639–651, Nov. 2021, doi: 10.1177/01436244211020470.

[9] M. I. Alhamid, Budihardjo, and A. Raymond, “Design of the ventilation system and the simulation of air flow in the negative isolation room using FloVent 8.2,” presented at the INTERNATIONAL CONFERENCE ON THERMAL SCIENCE AND TECHNOLOGY (ICTST) 2017, Bali, Indonesia, 2018, p. 020016. doi: 10.1063/1.5046600.

[10] Joel Good, Andrea Frisque, and Duncan Phillips, “The role of wind in natural ventilation simulations using airflow network models,” *Proc. SimBuild*, vol. 3, no. 1, pp. 140–147, 2008.

[11] A. Aflaki, N. Mahyuddin, Z. Al-Cheikh Mahmoud, and M. R. Baharum, “A review on natural ventilation applications through building façade components and ventilation openings in tropical climates,” *Energy Build.*, vol. 101, pp. 153–162, Aug. 2015, doi: 10.1016/j.enbuild.2015.04.033.

[12] M. M. Razek, G. B. Hanna, E. M. El-Salam, and N. Farag, “COMPUTER SIMULATION AND THERMAL MEASUREMENTS OF PASSIVE HEATED AND VENTILATED BUILDINGS,” in *Passive and Low Energy Ecotechniques*, A. Bowen, Ed., Pergamon, 1985, pp. 952–959. doi: 10.1016/B978-0-08-031644-4.50080-1.

[13] Y. Hu *et al.*, “Impact of Indoor-Outdoor Temperature Difference on Building Ventilation and Pollutant Dispersion within Urban Communities,” *Atmosphere*, vol. 13, no. 1, Art. no. 1, Jan. 2022, doi: 10.3390/atmos13010028.

[14] A. Daoud and N. Galanis, “Prediction of airflow patterns in a ventilated enclosure with zonal methods,” *Appl. Energy*, vol. 85, no. 6, pp. 439–448, Jun. 2008, doi: 10.1016/j.apenergy.2007.10.002.

[15] Z. Afroz, T. Urmee, G. M. Shafiullah, and G. Higgins, “Real-time prediction model for indoor temperature in a commercial building,” *Appl. Energy*, vol. 231, pp. 29–53, Dec. 2018, doi: 10.1016/j.apenergy.2018.09.052.

[16] N. M. Ali, M. S. M. Yatim, and R. Bahsan, “CFD analysis on velocity and temperature distribution of airflow inside model building with windcatcher,” *IOP Conf. Ser. Mater. Sci. Eng.*, vol. 834, no. 1, p. 012036, Apr. 2020, doi: 10.1088/1757-899X/834/1/012036.

[17] A. Stamou and I. Katsiris, “Verification of a CFD model for indoor airflow and heat transfer,” *Build. Environ.*, vol. 41, no. 9, pp. 1171–1181, Sep. 2006, doi: 10.1016/j.buildenv.2005.06.029.

[18] Q. Zhou and R. Ooka, “Comparison of different deep neural network architectures for isothermal indoor airflow prediction,” *Build. Simul.*, vol. 13, no. 6, pp. 1409–1423, Dec. 2020, doi: 10.1007/s12273-020-0664-8.

[19] S. Angra and S. Ahuja, “Machine learning and its applications: A review,” in *2017 International Conference on Big Data Analytics and Computational Intelligence (ICBDAC)*, Chirala, Andhra Pradesh, India: IEEE, Mar. 2017, pp. 57–60. doi: 10.1109/ICBDACI.2017.8070809.

[20] T. Jiang, J. L. Gradus, and A. J. Rosellini, “Supervised Machine Learning: A Brief Primer,” *Behav. Ther.*, vol. 51, no. 5, pp. 675–687, Sep. 2020, doi: 10.1016/j.beth.2020.05.002.

[21] D. Kochkov, J. A. Smith, A. Alieva, Q. Wang, M. P. Brenner, and S. Hoyer, “Machine learning–accelerated computational fluid dynamics,” *Proc. Natl. Acad. Sci.*, vol. 118, no. 21, p. e2101784118, May 2021, doi: 10.1073/pnas.2101784118.

[22] “Integrating machine learning in embedded sensor systems for Internet-of-Things applications | IEEE Conference Publication | IEEE Xplore.” https://ieeexplore.ieee.org/abstract/document/7886051/ (accessed Mar. 09, 2023).

[23] T. Kramer, V. Garcia-Hansen, S. O. V. M. Nik, and D. Chen, “A Machine Learning approach to enhance indoor thermal comfort in a changing climate,” *J. Phys. Conf. Ser.*, vol. 2042, no. 1, p. 012070, Nov. 2021, doi: 10.1088/1742-6596/2042/1/012070.

[24] H. Ozaki and T. Aoyagi, "Prediction of steady flows passing fixed cylinders using deep learning," *Sci. Rep.*, vol. 12, no. 1, Art. no. 1, Jan. 2022, doi: 10.1038/s41598-021-03651-8.

[25] "Thermal comfort prediction by applying supervised machine learning in green sidewalks of Tehran | Emerald Insight." https://www.emerald.com/insight/content/doi/10.1108/SASBE-03-2019-0028/full/html?casa_token=x9pVo2VvmM0AAAAA:H7AO0BdG7A7z57yzXFu0ZM7agz02eLnIRQmEqisJ4GlFBMVQTdz7GTElN9Hf6Vl85yk2_1kWR-aDBoMaOM_1THUv81dsj8RrFeRyYa69DDkKzk9cc3Mi8A (accessed Mar. 13, 2023).

[26] R. A. Ramadhan, "Rancang Bangun Algoritma Prediksi Pola Aliran Udara Pada Ruang Studi Kasus TN-7 DTNTF Menggunakan Metode Kecerdasan Buatan," Universitas Gadjah Mada, Yogyakarta, 2022.

[27] G. Tardioli, R. Filho, P. Bernaud, and D. Ntimos, "An Innovative Modelling Approach Based on Building Physics and Machine Learning for the Prediction of Indoor Thermal Comfort in an Office Building," *Buildings*, vol. 12, no. 4, Art. no. 4, Apr. 2022, doi: 10.3390/buildings12040475.

[28] F. Troncoso-Pastoriza, M. Martínez-Comesaña, A. Ogando-Martínez, J. López-Gómez, P. Eguía-Oller, and L. Febrero-Garrido, "IoT-based platform for automated IEQ spatio-temporal analysis in buildings using machine learning techniques," *Autom. Constr.*, vol. 139, p. 104261, Jul. 2022, doi: 10.1016/j.autcon.2022.104261.

[29] H. H. Ali, M. Abdullah, and M. Wedyan, "Application of machine learning techniques to predict patient's satisfaction of indoor environmental quality in Jordanian hospitals," *J. Ambient Intell. Humaniz. Comput.*, Jun. 2022, doi: 10.1007/s12652-022-04021-6.

[30] J. G. Allen and J. D. Macomber, *Healthy Buildings: How Indoor Spaces Can Make You Sick—or Keep You Well*. Harvard University Press, 2022.

[31] E. Lanniello and F. D'Ambrosio Alfano, "WS10: The REHVA guidebook on indoor environment and energy efficiency in schools - Part 1. Principles," *REHVA Eur. HVAC J.*, pp. 35–38, Jan. 2010.

[32] O. US EPA, "Introduction to Indoor Air Quality," Aug. 14, 2014. https://www.epa.gov/indoor-air-quality-iaq/introduction-indoor-air-quality (accessed Apr. 21, 2023).

[33] S. Kubba, "Chapter Seven - Indoor Environmental Quality," in *Handbook of Green Building Design and Construction (Second Edition)*, S. Kubba, Ed., Butterworth-Heinemann, 2017, pp. 353–412. doi: 10.1016/B978-0-12-810433-0.00007-1.

[34] S. Vardoulakis *et al.*, "Indoor Exposure to Selected Air Pollutants in the Home Environment: A Systematic Review," *Int. J. Environ. Res. Public. Health*, vol. 17, no. 23, p. 8972, Dec. 2020, doi: 10.3390/ijerph17238972.

[35] A. Mendes and J. P. Teixeira, "Sick Building Syndrome," in *Encyclopedia of Toxicology (Third Edition)*, P. Wexler, Ed., Oxford: Academic Press, 2014, pp. 256–260. doi: 10.1016/B978-0-12-386454-3.00432-2.

[36] D. Y. C. Leung, "Outdoor-indoor air pollution in urban environment: challenges and opportunity," *Front. Environ. Sci.*, vol. 2, 2015, Accessed:

Apr. 21, 2023. [Online]. Available: https://www.frontiersin.org/articles/10.3389/fenvs.2014.00069

[37] S. Sadrizadeh *et al.*, "Indoor air quality and health in schools: A critical review for developing the roadmap for the future school environment," *J. Build. Eng.*, vol. 57, p. 104908, Oct. 2022, doi: 10.1016/j.jobe.2022.104908.

[38] "ANSI/ASHRAE Addendum s to ANSI/ASHRAE Standard 62.1-2016".

[39] O. US EPA, "Reference Guide for Indoor Air Quality in Schools," Oct. 02, 2014. https://www.epa.gov/iaq-schools/reference-guide-indoor-air-quality-schools (accessed Jul. 14, 2023).

[40] P. O. Fanger, *Thermal Comfort: Analysis and Applications in Environmental Engineering*. McGraw-Hill, 1970.

[41] W.-J. Jo and J.-Y. Sohn, "The effect of environmental and structural factors on indoor air quality of apartments in Korea," *Build. Environ.*, vol. 44, no. 9, pp. 1794–1802, Sep. 2009, doi: 10.1016/j.buildenv.2008.12.003.

[42] R. K. Bhagat, M. S. D. Wykes, S. B. Dalziel, and P. F. Linden, "Effects of ventilation on the indoor spread of COVID-19," *J. Fluid Mech.*, vol. 903, p. F1, Nov. 2020, doi: 10.1017/jfm.2020.720.

[43] T. Kalmár, F. Szodrai, and F. Kalmár, "Local ventilation effectiveness dependence on the airflow pattern and temperature in the case of isothermal balanced ventilation," *J. Build. Eng.*, vol. 61, p. 105309, Dec. 2022, doi: 10.1016/j.jobe.2022.105309.

[44] F. Cheng, S. Zhang, S. Gao, X. Tian, C. Liao, and Y. Cheng, "Experimental investigation of airflow pattern and turbulence characteristics of stratum ventilation in heating mode," *Build. Environ.*, vol. 186, p. 107339, Dec. 2020, doi: 10.1016/j.buildenv.2020.107339.

[45] J. J. Aguilera, R. Korsholm Andersen, and J. Toftum, "Prediction of Indoor Air Temperature Using Weather Data and Simple Building Descriptors," *Int. J. Environ. Res. Public. Health*, vol. 16, no. 22, Art. no. 22, Jan. 2019, doi: 10.3390/ijerph16224349.

[46] Z. Afroz, G. Shafiullah, T. Urmee, and G. Higgins, "Prediction of Indoor Temperature in an Institutional Building," *Energy Procedia*, vol. 142, pp. 1860–1866, Dec. 2017, doi: 10.1016/j.egypro.2017.12.576.

[47] J. Song, G. Xue, Y. Ma, H. Li, Y. Pan, and Z. Hao, "An Indoor Temperature Prediction Framework Based on Hierarchical Attention Gated Recurrent Unit Model for Energy Efficient Buildings," *IEEE Access*, vol. 7, pp. 157268–157283, 2019, doi: 10.1109/ACCESS.2019.2950341.

[48] Yunus A. Çengel, *Heat transfer : a practical approach*. Boston: McGraw-Hill, 1998.

[49] Yunus A. Çengel and John M. Cimbala, *Fluid Mechanics : Fundamental and Application*. Boston: McGrawHill Education, 2006.

[50] Z. (John) Zhai, M. E. Mankibi, and A. Zoubir, "Review of Natural Ventilation Models," *Energy Procedia*, vol. 78, pp. 2700–2705, Nov. 2015, doi: 10.1016/j.egypro.2015.11.355.

[51] J. G. Allen and A. M. Ibrahim, "Indoor Air Changes and Potential Implications for SARS-CoV-2 Transmission," *JAMA*, vol. 325, no. 20, pp. 2112–2113, May 2021, doi: 10.1001/jama.2021.5053.

[52] "Products | IES." https://www.iesve.com/products (accessed Apr. 10, 2023).
[53] "Climate Consultant," *Global Climate Action Partnership*. https://globalclimateactionpartnership.org/resource/climate-consultant/ (accessed May 27, 2023).
[54] Md. F. Hossain, "Chapter Seven - Best Management Practices," in *Sustainable Design and Build*, Md. F. Hossain, Ed., Butterworth-Heinemann, 2019, pp. 419–431. doi: 10.1016/B978-0-12-816722-9.00007-0.
[55] P. M. Chanal, M. S. Kakkasageri, and S. K. S. Manvi, "Chapter 7 - Security and privacy in the internet of things: computational intelligent techniques-based approaches," in *Recent Trends in Computational Intelligence Enabled Research*, S. Bhattacharyya, P. Dutta, D. Samanta, A. Mukherjee, and I. Pan, Eds., Academic Press, 2021, pp. 111–127. doi: 10.1016/B978-0-12-822844-9.00009-8.
[56] Alexey Grigorev, *Machine Learning Bookcamp: Build a portfolio of real-life projects*, First. New York: Manning, 2021.
[57] M. Algren, W. Fisher, and A. E. Landis, "Chapter 8 - Machine learning in life cycle assessment," in *Data Science Applied to Sustainability Analysis*, J. Dunn and P. Balaprakash, Eds., Elsevier, 2021, pp. 167–190. doi: 10.1016/B978-0-12-817976-5.00009-7.
[58] B. Mahesh, *Machine Learning Algorithms -A Review*. 2019. doi: 10.21275/ART20203995.
[59] D. Maulud and A. M. Abdulazeez, "A Review on Linear Regression Comprehensive in Machine Learning," *J. Appl. Sci. Technol. Trends*, vol. 1, no. 4, pp. 140–147, Dec. 2020, doi: 10.38094/jastt1457.
[60] "Scikit Learn Tutorial." https://www.tutorialspoint.com/scikit_learn/index.htm (accessed Apr. 13, 2023).
[61] "scikit-learn: machine learning in Python — scikit-learn 1.2.2 documentation." https://scikit-learn.org/stable/ (accessed Apr. 13, 2023).
[62] M. T. Kane, "Symmetric Least Squares Estimates of Functional Relationships," *ETS Res. Rep. Ser.*, vol. 2021, no. 1, pp. 1–14, 2021, doi: 10.1002/ets2.12331.
[63] N. A. Butler, "The efficiency of ordinary least squares in designed experiments subject to spatial or temporal variation," *Stat. Probab. Lett.*, vol. 41, no. 1, pp. 73–81, Jan. 1999, doi: 10.1016/S0167-7152(98)00126-6.
[64] J. Ranstam and J. A. Cook, "LASSO regression," *Br. J. Surg.*, vol. 105, no. 10, p. 1348, Sep. 2018, doi: 10.1002/bjs.10895.
[65] C. S. Signorino and A. Kirchner, "Using LASSO to Model Interactions and Nonlinearities in Survey Data," *Surv. Pract.*, vol. 11, no. 1, Jan. 2018, doi: 10.29115/SP-2018-0005.
[66] "sklearn.linear_model.Lasso," *scikit-learn*. https://scikit-learn/stable/modules/generated/sklearn.linear_model.Lasso.html (accessed Apr. 12, 2023).
[67] D. Chicco, M. J. Warrens, and G. Jurman, "The coefficient of determination R-squared is more informative than SMAPE, MAE, MAPE, MSE and RMSE

in regression analysis evaluation,” *PeerJ Comput. Sci.*, vol. 7, p. e623, Jul. 2021, doi: 10.7717/peerj-cs.623.

[68] “Interpreting regression models in clinical outcome studies - PMC.” https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4678365/ (accessed Apr. 11, 2023).

[69] J. F. Hair, C. M. Ringle, and M. Sarstedt, “PLS-SEM: Indeed a Silver Bullet,” *J. Mark. Theory Pract.*, vol. 19, no. 2, pp. 139–152, Apr. 2011, doi: 10.2753/MTP1069-6679190202.

[70] Pradhitiya Puja Imam Syechrony Sinuhaji, “Karakterisasi Aliran Udara pada Ruang Kelas TN7 Departemen Teknik Nuklir dan Teknik Fisika menggunakan Perangkat Lunak IESVE (Integrated Enviromental Solution Virtual Enviroment),” Universitas Gadjah Mada, Yogyakarta, 2022.

[71] W. R. Menetrey, “Estimate of Solar-Thermionic System Performance Presented as Preprint 64-718 at the Third Biennial Aerospace Power Systems Conference, Philadelphia, Pa., September 1-4, 1964.,” in *Progress in Astronautics and Rocketry*, G. C. Szego and J. E. Taylor, Eds., in Space Power Systems Engineering, vol. 16. Elsevier, 1966, pp. 283–297. doi: 10.1016/B978-1-4832-3056-6.50015-3.

[72] “sklearn.linear_model.LinearRegression,” *scikit-learn*. https://scikit-learn/stable/modules/generated/sklearn.linear_model.LinearRegression.html (accessed Apr. 10, 2023).