

REFERENCES

- [1] W. H. Organization, "WHO highlights urgent need to transform mental health and mental health care." [Online]. Available: <https://www.who.int/news/item/17-06-2022-who-highlights-urgent-need-to-transform-mental-health-and-mental-health-care>
- [2] J. A. Naslund, A. Bondre, J. Torous, and K. A. Aschbrenner, "Social Media and Mental Health: Benefits, Risks, and Opportunities for Research and Practice," *J. Technol. Behav. Sci.*, vol. 5, no. 3, pp. 245–257, 2020, doi: 10.1007/s41347-020-00134-x.
- [3] S. Chancellor and M. De Choudhury, "Methods in predictive techniques for mental health status on social media: a critical review," *npj Digit. Med.*, vol. 3, no. 1, 2020, doi: 10.1038/s41746-020-0233-7.
- [4] N. Braig, A. Benz, S. Voth, J. Breitenbach, and R. Buettner, "Machine Learning Techniques for Sentiment Analysis of COVID-19-Related Twitter Data," *IEEE Access*, vol. 11, pp. 14778–14803, 2023, doi: 10.1109/ACCESS.2023.3242234.
- [5] Y. Ding, X. Chen, Q. Fu, and S. Zhong, "A Depression Recognition Method for College Students Using Deep Integrated Support Vector Algorithm," *IEEE Access*, vol. 8, pp. 75616–75629, 2020, doi: 10.1109/ACCESS.2020.2987523.
- [6] N. Al Asad, M. A. Mahmud Pranto, S. Afreen, and M. M. Islam, "Depression Detection by Analyzing Social Media Posts of User," in *2019 IEEE International Conference on Signal Processing, Information, Communication & Systems (SPICSCON)*, 2019, pp. 13–17. doi: 10.1109/SPICSCON48833.2019.9065101.
- [7] Z. N. Vasha, B. Sharma, I. J. Esha, J. Al Nahian, and J. A. Polin, "Depression detection in social media comments data using machine learning algorithms," *Bull. Electr. Eng. Informatics*, vol. 12, no. 2, pp. 987–996, 2023, doi: 10.11591/eei.v12i2.4182.
- [8] A. Renaldi and W. Maharani, "Depression Detection of User in Media Social Twitter Using Random Forest," *J. Inf. Syst. Res.*, vol. 3, no. 4, pp. 410–416, 2022, doi: 10.47065/josh.v3i4.1837.
- [9] R. H. H. Aziz and N. Dimililer, "Twitter Sentiment Analysis using an Ensemble Weighted Majority Vote Classifier," *3rd Int. Conf. Adv. Sci. Eng. ICOASE 2020*, pp. 103–109, 2020, doi: 10.1109/ICOASE51841.2020.9436590.
- [10] W. Bin Tahir, S. Khalid, S. Almutairi, M. Abohashrh, S. A. Memon, and J. Khan, "Depression Detection in Social Media: A Comprehensive Review of Machine Learning and Deep Learning Techniques," *IEEE Access*, vol. 13, no. December 2024, pp. 12789–12818, 2025, doi: 10.1109/ACCESS.2025.3530862.
- [11] K. E. Hoque and H. Aljamaan, "Impact of hyperparameter tuning on machine learning models in stock price forecasting," *IEEE Access*, vol. 9, pp. 163815–163830, 2021, doi: 10.1109/ACCESS.2021.3134138.
- [12] InfamousCoder, "Depression: Twitter Dataset + Feature Extraction." [Online]. Available: <https://www.kaggle.com/datasets/infamouscoder/mental-health-social-media/data>
- [13] Z. Jianqiang and G. Xiaolin, "Comparison research on text pre-processing methods on twitter sentiment analysis," *IEEE Access*, vol. 5, no. c, pp. 2870–2879, 2017, doi: 10.1109/ACCESS.2017.2672677.
- [14] F. D. Wibowo, I. Palupi, and B. A. Wahyudi, "Image Detection for Common Human Skin Diseases in Indonesia Using CNN and Ensemble Learning Method," *J. Comput. Syst. Informatics*, vol. 3, no. 4, pp. 527–535, 2022, doi: 10.47065/josyc.v3i4.2151.
- [15] B. A. Mustofa, W. Laksito, and Y. Saptomo, "Journal of Artificial Intelligence and Engineering Applications Use of Natural Language Processing in Social Media Text Analysis," vol. 4, no. 2, pp. 2808–4519, 2025, [Online]. Available: <https://ioinformatic.org/>
- [16] A. W. Pradana and M. Hayaty, "The Effect of Stemming and Removal of Stopwords on the Accuracy of Sentiment Analysis on Indonesian-language Texts," *Kinet. Game Technol. Inf. Syst. Comput. Network, Comput. Electron. Control*, vol. 4, no. 3, pp. 375–380, 2019, doi: 10.22219/kinetik.v4i4.912.
- [17] R. Pramana, Debora, J. J. Subroto, A. A. S. Gunawan, and Anderies, "Systematic Literature Review of Stemming and Lemmatization Performance for Sentence Similarity," *Proc. 2022 IEEE 7th Int. Conf. Inf. Technol. Digit. Appl. ICITDA 2022*, no. November 2022, 2022, doi: 10.1109/ICITDA55840.2022.9971451.
- [18] T. E. Ramya and S. Sindhupriya, "An Effective Approach for Mental Health Prediction Using Machine Learning Algorithm," *Int. J. Eng. Res. Technollogy*, vol. 10, no. 13, pp. 81–84, 2022.
- [19] wesam ahmed, N. Semary, K. Amin, and M. Adel Hammad, "Sentiment Analysis on Twitter Using Machine Learning Techniques and TF-IDF Feature Extraction: A Comparative Study," *IJCI. Int. J. Comput. Inf.*, vol. 10, no. 3, pp. 52–57, 2023, doi: 10.21608/ijci.2023.236052.1128.
- [20] H. Bichri, A. Chergui, and M. Hain, "Investigating the Impact of Train / Test Split Ratio on the Performance of Pre-Trained Models with Custom Datasets," *Int. J. Adv. Comput. Sci. Appl.*, vol. 15, no. 2, pp. 331–339, 2024, doi: 10.14569/IJACSA.2024.0150235.
- [21] M. S. Santos, J. P. Soares, P. H. Abreu, H. Araujo, and J. Santos, "Cross-validation for imbalanced datasets: Avoiding overoptimistic and overfitting approaches [Research Frontier]," *IEEE Comput. Intell. Mag.*, vol. 13, no. 4, pp. 59–76, 2018, doi: 10.1109/MCI.2018.2866730.
- [22] P. M. Mathapati, A. S. Shahapurkar, and K. D. Hanabaratti, "Sentiment Analysis using Naïve bayes Algorithm," *Int. J. Comput. Sci. Eng.*, vol. 5, no. 7, pp. 75–77, 2017, doi: 10.26438/ijcse/v5i7.7577.
- [23] D. Pradana and E. Sugiharti, "Implementation Data Mining with Naive Bayes Classifier Method and Laplace Smoothing to Predict Students Learning Results," *Recursive J. Informatics*, vol. 1, no. 1, pp. 1–8, 2023, doi: 10.15294/rji.v1i1.63964.
- [24] J. Nayak, B. Naik, and H. S. Behera, "A Comprehensive Survey on Support Vector Machine in Data Mining Tasks: Applications & Challenges," *Int. J. Database Theory Appl.*, vol. 8, no. 1, pp. 169–186, 2015, doi: 10.14257/ijdta.2015.8.1.18.

- [25] D. Mustafa Abdullah and A. Mohsin Abdulazeez, "Machine Learning Applications based on SVM Classification A Review," *Qubahan Acad. J.*, vol. 1, no. 2 SE-Articles, pp. 81–90, Apr. 2021, doi: 10.48161/qaj.v1n2a50.
- [26] I. Palupi, B. ari Wahyudi, N. AL Mamuda, and A. Shabrina, "Predicting Forest Fire Hotspots with Carbon Emission Insights Using Random Forest and Gradient Boosting Regression," *Int. J. Inf. Commun. Technol.*, vol. 9, no. 2, pp. 137–149, 2023, doi: 10.21108/ijoi.v9i2.865.
- [27] S. L. Setyowati, A. Qalbi, R. Aristawidya, B. Sartono, and A. R. Firdawanti, "Optimizing Random Forest Parameters with Hyperparameter Tuning for Classifying School-Age KIP Eligibility in West Java," *Jambura J. Math.*, vol. 7, no. 1, pp. 40–48, 2025, doi: 10.37905/jjom.v7i1.28736.
- [28] M. S. Hashim and A. A. Yassin, "Breast Cancer Prediction Using Soft Voting Classifier Based on Machine Learning Models," *IAENG Int. J. Comput. Sci.*, vol. 50, no. 2, 2023.
- [29] Ž. Vujović, "Classification Model Evaluation Metrics," *Int. J. Adv. Comput. Sci. Appl.*, vol. 12, no. 6, pp. 599–606, 2021, doi: 10.14569/IJACSA.2021.0120670.