

## DAFTAR PUSTAKA

- [1] M. N. Alenezi and Z. M. Alqenaei, "Machine Learning in Detecting Covid-19 Misinformation on Twitter," *Futur. Internet*, vol. 13, no. 10, 2021.
- [2] A. Efe and H. Suliman, "How Privacy is Threatened from Social Media Communication?," *Anatol. J. Comput. Sci.*, vol. 6, no. 1, pp. 32–45, 2021.
- [3] I. Bozkurt and B. Chaurasia, "Attitudes of Neurosurgeons Toward Social Media: A Multi-Institutional Study," *World Neurosurg.*, vol. 147, pp. e396–e404, 2021.
- [4] P. Assiroj, Meyliana, A. N. Hidayanto, H. Prabowo, and H. L. H. S. Warnars, "Hoax News Detection on Social Media: A Survey," in *1st 2018 Indonesian Association for Pattern Recognition International Conference, INAPR*, 2018, pp. 186–191.
- [5] P. Vyas, G. Vyas, and J. Liu, "Proliferation of Health Misinformation on Social Media Platforms: A Systematic Literature Review," *Issues Inf. Syst.*, 2021.
- [6] L. Tian, X. Zhang, and J. H. Lau, "#Democrats are Destroying America: Rumour analysis on Twitter during COVID-19," in *CEUR Workshop Proceedings*, 2020, vol. 2699.
- [7] J. Xiong, O. Lipsitz, F. Nasri, L. Lui, Gill, and Phan, "Impact Of COVID-19 Pandemic on Mental Health in The General Population: A Systematic Review," *J. Affect. Disord.*, 2020.
- [8] N. Karimi and J. Gambrell, "Hundreds Die of Poisoning in Iran as Fake News Suggests Methanol Cure for Virus," *The Times of Israel*, 2020. <https://www.timesofisrael.com/hundreds-die-of-poisoning-in-iran-as-fake-news-suggests-methanol-cure-for-virus/> (accessed Nov. 14, 2021).
- [9] J. Zarocostas, "Understanding the Infodemic and Misinformation in the Fight Against COVID-19," *Pan Am. Heal. Organ.*, p. 2, 2020.
- [10] P. Patwa *et al.*, "Fighting an Infodemic: Covid-19 Fake News Dataset," *arXiv Prepr. arXiv2011.03327*, 2020.
- [11] K. Shu, A. Sliva, S. Wang, J. Tang, and H. Liu, "Fake News Detection on Social Media," *ACM SIGKDD Explor. Newsl.*, vol. 19, no. 1, pp. 22–36, 2017.
- [12] R. Kouzy *et al.*, "Coronavirus Goes Viral: Quantifying the COVID-19 Misinformation Epidemic on Twitter," *Cureus*, 2020.
- [13] O. D. Apuke and B. Omar, "User Motivation in Fake News Sharing during the COVID-19 Pandemic: An Application of the Uses and Gratification Theory," *Online Inf. Rev.*, vol. 45, no. 1, pp. 220–239, 2021.
- [14] T. Porat, P. Garaizar, M. Ferrero, H. Jones, M. Ashworth, and M. A. Vadillo, "Content and Source Analysis of Popular Tweets Following a Recent Case of Diphtheria in Spain," *Eur. J. Public Health*, vol. 29, no. 1, pp. 117–122, 2019.
- [15] S. Shi, A. R. Brant, A. Sabolch, and E. Pollom, "False News of a Cannabis

- Cancer Cure," *Cureus*, 2019.
- [16] F. Smaldone, A. Ippolito, and M. Ruberto, "The Shadows Know Me: Exploring the Dark Side of Social Media in The Healthcare Field," *Eur. Manag. J.*, vol. 38, no. 1, pp. 19–32, 2020.
  - [17] A. Lakshmanarao, Y. Swathi, and T. Srinivasa Ravi Kiran, "An Efficient Fake News Detection System using Machine Learning," *Int. J. Innov. Technol. Explor. Eng.*, vol. 8, no. 10, pp. 3125–3129, 2019.
  - [18] F. Ahmad and R. Lokeshkumar, "A Comparison of Machine Learning Algorithms in Fake News Detection," *Int. J. Emerg. Technol.*, vol. 10, no. 4, pp. 177–183, 2019.
  - [19] P. Reddy, D. E. Roy, P. Manoj, M. Keerthana, and P. V Tijare, "A Study on Fake News Detection Using Naïve Bayes, SVM, Neural Networks and LSTM," *J. Adv. Res. Dyn. Control Syst.*, vol. 11, no. 06, pp. 942–947, 2019.
  - [20] T. T. A. Putri, H. S. Warra, I. Y. Sitepu, and M. Sihombing, "Analysis and Detection of Hoax Contents in Indonesian News Based on Machine Learning," *J. Informatics Pelita Nusant.*, vol. 4, no. 1, pp. 19–26, 2019.
  - [21] S. R. Krishna, S. V Vasantha, and K. M. Deep, "Survey on Fake News Detection using Machine Learning Algorithms," *Int. J. Eng. Res. Technol.*, vol. 8, no. 8, pp. 121–125, 2021.
  - [22] B. P. Nayoga, R. Adipradana, R. Suryadi, and D. Suhartono, "Hoax Analyzer for Indonesian News Using Deep Learning Models," *Procedia Comput. Sci.*, vol. 179, pp. 704–712, Jan. 2021.
  - [23] P. Kamble, A. Dighe, P. Naik, and S. Subhedar, "Hoax News Detection using Convolutional Neural Network," *J. Oper. Syst. Dev. Trends*, vol. 7, no. 2, pp. 19–23, 2020.
  - [24] S. Sridhar and S. Sanagavarapu, "Fake News Detection and Analysis using Multitask Learning with Bilstm Capsnet Model," in *Proceedings of the Confluence 2021: 11th International Conference on Cloud Computing, Data Science and Engineering*, 2021, pp. 905–911.
  - [25] I. K. Sastrawan, I. Bayupati, and D. M. S. Arsa, "Detection of Fake News Using Deep Learning CNN–RNN Based Methods," *ICT Express*, 2021.
  - [26] P. Bahad, P. Saxena, and R. Kamal, "Fake News Detection using Bi-directional LSTM-Recurrent Neural Network," in *Procedia Computer Science*, 2019, vol. 165, pp. 74–82.
  - [27] A. Zangrillo *et al.*, "Fast Reshaping of Intensive Care Unit Facilities in A Large Metropolitan Hospital in Milan, Italy: Facing The COVID-19 Pandemic Emergency," *Crit. Care Resusc.*, vol. 22, no. 2, pp. 91–94, 2020.
  - [28] World Health Organization, "Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19)," 2020.
  - [29] M. H. Chua *et al.*, "Face Masks in the New COVID-19 Normal: Materials, Testing, and Perspectives." 2020.
  - [30] M. W. Russell, Z. Moldoveanu, P. L. Ogra, and J. Mestecky, "Mucosal Immunity in COVID-19: A Neglected but Critical Aspect of SARS-CoV-2 Infection," *Front. Immunol.*, 2020.

- [31] R. Rettner, “Face Masks may Reduce COVID-19 Spread by 85%, WHO-Backed Study Suggests,” *Live Science*, 2020. .
- [32] F. Di Gennaro *et al.*, “Coronavirus Diseases (COVID-19) Current Status and Future Perspectives: A Narrative Review,” *Int. J. Environ. Res. Public Health*, vol. 17, no. 8, 2020.
- [33] World Health Organization, “Coronavirus Disease (COVID-19): Similarities and Differences with Influenza,” *WHO*, 2020. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19-similarities-and-differences-with-influenza> (accessed Apr. 16, 2021).
- [34] A. S. Agustina and R. Fajrunni'mah, “Perbandingan Metode RT-PCR dan Tes Rapid Antibodi untuk Deteksi COVID-19,” *J. Kesehat. Manarang*, vol. 6, no. Khusus, p. 47, 2020.
- [35] World Health Organization, “Pertanyaan Jawaban terkait COVID-19 untuk Publik,” 2020. <https://www.who.int/indonesia/news/novel-coronavirus/qa/qa-for-public> (accessed Apr. 16, 2021).
- [36] J. H. Kim, F. Marks, and J. D. Clemens, “Looking Beyond COVID-19 Vaccine Phase 3 Trials,” *Nature Medicine*, vol. 27, no. 2. pp. 205–211, 2021.
- [37] A. B. Prasetijo, R. R. Isnanto, D. Eridani, Y. A. A. Soetrisno, M. Arfan, and A. Sofwan, “Hoax Detection System on Indonesian News Sites based on Text Classification using SVM and SGD,” in *International Conference on Information Technology, Computer, and Electrical Engineering*, 2017, vol. 2018-Janua, pp. 45–49.
- [38] A. Pandhu Wijaya and H. Agus Santoso, “Improving the Accuracy of Naïve Bayes Algorithm for Hoax Classification Using Particle Swarm Optimization,” in *International Seminar on Application for Technology of Information and Communication*, 2018, pp. 482–487.
- [39] H. A. Santoso, E. H. Rachmawanto, A. Nugraha, A. A. Nugroho, D. R. I. M. Setiadi, and R. S. Basuki, “Hoax Classification and Sentiment Analysis of Indonesian News using Naive Bayes Optimization,” *Telkomnika (Telecommunication Comput. Electron. Control.)*, 2020.
- [40] W. Y. Ayele, “Adapting CRISP-DM for Idea Mining a Data Mining Process for Generating Ideas using a Textual Dataset,” *Int. J. Adv. Comput. Sci. Appl.*, vol. 11, no. 6, pp. 20–32, 2020.
- [41] F. Martinez-Plumed *et al.*, “CRISP-DM Twenty Years Later: From Data Mining Processes to Data Science Trajectories,” *IEEE Trans. Knowl. Data Eng.*, vol. 4347, no. c, pp. 1–1, 2019.
- [42] T. Mauritsius, A. S. Braza, and Fransisca, “Bank Marketing Data Mining using CRISP-DM Approach,” *Int. J. Adv. Trends Comput. Sci. Eng.*, vol. 8, no. 5, pp. 2322–2329, 2019.
- [43] C. Schröer, F. Kruse, and J. M. Gómez, “A Systematic Literature Review on Applying CRISP-DM Process Model,” *Procedia Comput. Sci.*, vol. 181, no. 2019, pp. 526–534, 2021.
- [44] N. Salkind, “Primary Data Source,” in *Encyclopedia of Research Design*,

- SAGE Publications, Inc., 2012.
- [45] S. Andrianie, L. Arofah, and R. D. Ariyanto, “Strengthening Religious Characters : Efforts to Save Indonesia,” in *Proceedings of the International Conference On Ummah: Digital Innovation, Humanities And Economy*, 2020, pp. 1–10.
  - [46] B. Setiawan, A. Sudargono, and P. Rohsulina, “Mapping Votes for Voting General Elections Members of The House Representatives, and Regional House Representatives in Sukoharjo Sub-District, Sukoharjo District 2019,” *J. Geogr. Sci. Educ.*, vol. 44, no. 12, pp. 2–8, 2019.
  - [47] D. Virmani and S. Taneja, *A Text Preprocessing Approach for Efficacious Information Retrieval*, vol. 669. Springer Singapore, 2019.
  - [48] A. Torayev, P. C. M. M. Magusin, C. P. Grey, C. Merlet, and A. A. Fraco, “Text Mining Assited Review of The Literature on Li-O<sub>2</sub> Batteries,” *J. Phys.*, 2019.
  - [49] M. J. Denny and A. Spirling, “Text Preprocessing For Unsupervised Learning: Why It Matters, When It Misleads, And What To Do About It,” *SSRN Electron. J.*, 2017.
  - [50] G. Gupta and S. Malhotra, “Text Document Tokenization for Word Frequency Count using Rapid Miner (Taking Resume as an Example),” *Int. Conf. Adv. Eng. Technol.*, no. Icaet, pp. 24–26, 2015.
  - [51] M. A. Rosid, A. S. Fitranji, I. R. I. Astutik, N. I. Mulloh, and H. A. Gozali, “Improving Text Preprocessing for Student Complaint Document Classification Using Sastrawi,” *IOP Conf. Ser. Mater. Sci. Eng.*, vol. 874, no. 1, 2020.
  - [52] A. F. Hidayatulah and M. R. Ma’arif, “Pre-processing Task in Indonesian Twitter Message,” *J. Phys.*, 2017.
  - [53] Wang, Yixia, and G. Spigler, “Understanding Happiness by Using a Crowd-sourced Database with Natural Language Processing,” 2020.
  - [54] M. Dwarampudi and N. V. S. Reddy, “Effects of Padding on LSTMs and CNNs,” *arXiv*, 2019.
  - [55] H. K. Farid, E. B. Setiawan, and I. Kurniawan, “Selection for Hoax News Detection on Twitter using Convolutional Neural Network,” *Ind J. Comput.*, vol. 5, no. December 2020, pp. 23–36, 2021.
  - [56] C. Szegedy *et al.*, “Going Deeper with Convolutions,” in *Proceedings of the 2015 IEEE Conference on Computer Vision and Pattern Recognition*, 2014, pp. 1–9.
  - [57] O. Adbel-Hamid, A. Mohamed, H. Jiang, and G. Penn, “Applying Convolutional Neural Networks Concepts To Hybrid Nn-Hmm,” *Icassp*, pp. 4277–4280, 2012.
  - [58] H. Wang, Y. Li, S. A. Khan, and Y. Luo, “Prediction of breast cancer distant recurrence using natural language processing and knowledge-guided convolutional neural network,” *Artif. Intell. Med.*, vol. 110, p. 101977, 2020.
  - [59] M. Giménez, J. Palanca, and V. Botti, “Semantic-Based Padding in Convolutional Neural Networks for Improving the Performance in Natural

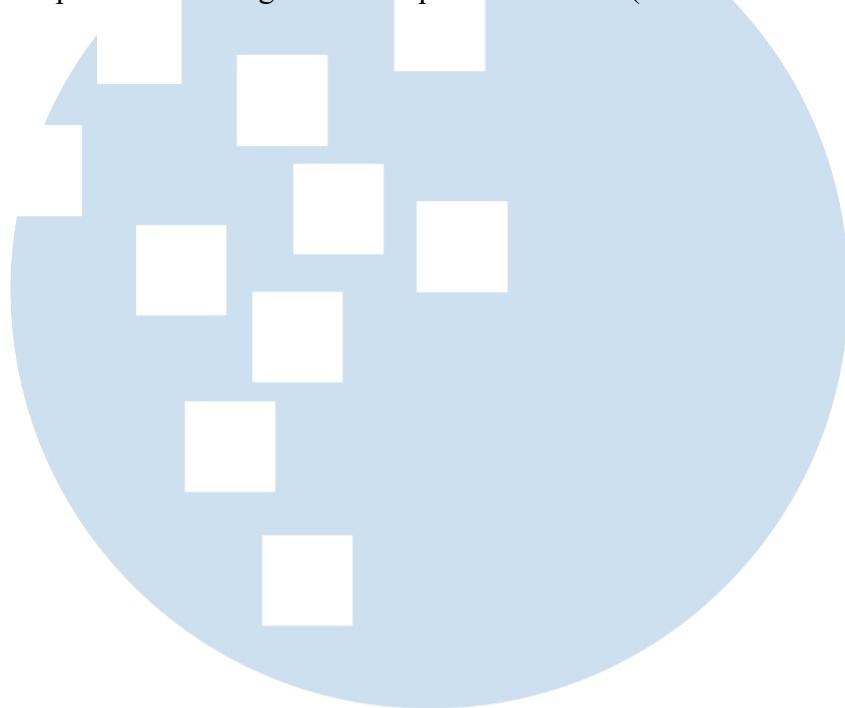
- Language Processing,” *Neurocomputing*, vol. 378, pp. 315–323, 2020.
- [60] P. Min, W. Chongyang, C. Tong, and L. Guangyuan, “NIRFaceNet: A Convolutional Neural Network for Near-Infrared Face Identification.” 2016.
- [61] I. Ahmad, M. Yousaf, S. Yousaf, and M. O. Ahmad, “Fake News Detection Using Machine Learning Ensemble Methods,” 2020.
- [62] V. Kotu and B. Deshpande, *Data Science: Concept and Practice*. Morgan Kaufmann, 2018.
- [63] W. S. Paka, R. Bansal, A. Kaushik, S. Sengupta, and T. Chakraborty, “Cross SEAN: A Cross Stitch Semi-supervised Neural Attention Model for COVID-19 Fake News Detection.” *Applied Soft Computing*, 2021.
- [64] W. H. Bangyal *et al.*, “Detection of Fake News Text Classification on COVID-19 Using Deep Learning Approaches,” *Comput. Math. Methods Med.*, vol. 2021, pp. 1–14, 2021, doi: 10.1155/2021/5514220.
- [65] A. A. Kurniawan and M. Mustikasari, “Implementasi Deep Learning Menggunakan Metode CNN dan LSTM untuk Menentukan Berita Palsu dalam Bahasa Indonesia,” *J. Inform. Univ. Pamulang*, vol. 5, no. 4, p. 544, 2021.
- [66] B. P. Nayoga, R. Adipradana, R. Suryadi, and D. Suhartono, “Hoax Analyzer for Indonesian News Using Deep Learning Models,” *Procedia Comput. Sci.*, vol. 179, no. 2020, pp. 704–712, 2021.
- [67] M. Nurlatifah and I. Irwansyah, “Fact-Checking dan Jurnalisme Kolaboratif pada Platform Media Online,” *J. Ilmu Komun.*, 2021.
- [68] M. Masril and F. W. Lubis, “Analisis Penggunaan Media Sosial dan Penyebaran Hoax Di Kota Medan,” *J. Simbolika Res. Learn. Commun. Study*, vol. 6, no. 1, pp. 11–22, 2020.
- [69] M. Cinelli *et al.*, “The COVID-19 Social Media Infodemic,” 2020.
- [70] N. Basias and Y. Pollalis, “Quantitative and Qualitative Research in Business Technology: Justifying a Suitable Research Methodology,” *Rev. Integr. Bus. Econ. Res.*, vol. 7, no. 1, pp. 91–105, 2018.
- [71] S. Ahmad, S. Wasim, S. Irfan, S. Gogoi, A. Srivastava, and Z. Farheen, “Qualitative v/s. Quantitative Research- A Summarized Review,” *J. Evid. Based Med. Healthc.*, vol. 6, no. 43, pp. 2828–2832, 2019.
- [72] I. Hermawan, “Metodologi Penelitian Pendidikan (Kualitatif, Kuantitatif dan Mixed Method),” *Hidayatul Quran*. p. 200, 2019.
- [73] D. McNabb, *Research Methods for Political Science: Quantitative, Qualitative and Mixed Method Approaches*. Routledge, 2020.
- [74] K. Crowston, E. E. Allen, and R. Heckman, “Using Natural Language Processing Technology for Qualitative Data Analysis,” *Int. J. Soc. Res. Methodol.*, vol. 15, no. 6, pp. 523–543, Nov. 2012.
- [75] Kaur, “Variables in Research,” *Indian J. Res. Reports Med. Sci.*, vol. 3, no. 4, pp. 36–38, 2013.
- [76] K. H. Siswoko, “Kebijakan Pemerintah Menangkal Penyebaran Berita Palsu atau ‘Hoax,’” *J. Muara Ilmu Sos. Humaniora, dan Seni*, vol. 1, no. 1, p. 13, 2017.

- [77] R. Mohammed, J. Rawashdeh, and M. Abdullah, “Machine Learning with Oversampling and Undersampling Techniques: Overview Study and Experimental Results,” in *2020 11th International Conference on Information and Communication Systems, ICICS 2020*, 2020, pp. 243–248.
- [78] J. Saltz, N. H.-2020 I. I. C. on Big, and undefined 2020, “Identifying the most Common Frameworks Data Science Teams Use to Structure and Coordinate their Projects,” *ieeexplore.ieee.org*, Accessed: Dec. 20, 2021. [Online]. Available: <https://ieeexplore.ieee.org/abstract/document/9377813/>.
- [79] J. S. Saltz and N. Hotz, “Identifying the most Common Frameworks Data Science Teams Use to Structure and Coordinate their Projects,” in *Proceedings - 2020 IEEE International Conference on Big Data, Big Data 2020*, 2020, pp. 2038–2042.
- [80] H. Wiemer, L. Drowatzky, and S. Ihlenfeldt, “Data mining methodology for engineering applications (DMME)-A holistic extension to the CRISP-DM model,” *Appl. Sci.*, vol. 9, no. 12, 2019.
- [81] W. Musu, A. Ibrahim, and Heriadi, “Pengaruh Komposisi Data Training dan Testing terhadap Akurasi Algoritma C4 . 5,” in *Prosiding Seminar Ilmiah Sistem Informasi Dan Teknologi Informasi*, 2021, pp. 186–195.
- [82] H. Liu, “A Location Independent Machine Learning Approach for Early Fake News Detection,” in *Proceedings - 2019 IEEE International Conference on Big Data, Big Data 2019*, 2019, pp. 4740–4746.
- [83] P. Bahad, P. Saxena, and R. Kamal, “Fake News Detection using Bi-directional LSTM-Recurrent Neural Network,” *Procedia Comput. Sci.*, vol. 165, pp. 74–82, 2019.
- [84] M. Hasnain, M. F. Pasha, I. Ghani, M. Imran, M. Y. Alzahrani, and R. Budiarto, “Evaluating Trust Prediction and Confusion Matrix Measures for Web Services Ranking,” *IEEE Access*, vol. 8, pp. 90847–90861, 2020.
- [85] M. Vakili, M. Ghamsari, and M. Rezaei, “Performance Analysis and Comparison of Machine and Deep Learning Algorithms for IoT Data Classification,” *arXiv*, 2020.
- [86] S. Ilahiyah and A. Nilogiri, “Implementasi Deep Learning Pada Identifikasi Jenis Tumbuhan Berdasarkan Citra Daun Menggunakan Convolutional Neural Network,” *JUSTINDO (Jurnal Sist. dan Teknol. Inf. Indones.)*, vol. 3, no. 2, pp. 49–56, 2018, Accessed: Jan. 13, 2022. [Online]. Available: <http://jurnal.unmuhammadiyah.ac.id/index.php/JUSTINDO/article/view/2254>.
- [87] O. Hrinchuk, V. Khrulkov, L. Mirvakhabova, E. Orlova, and I. Oseledets, “Tensorized Embedding Layers for Efficient Model Compression,” Jan. 2019.
- [88] S. Singh, V. K. Chauhan, and E. H. B. Smith, “A Self Controlled RDP Approach for Feature Extraction in Online Handwriting Recognition using Deep Learning,” *Appl. Intell.*, vol. 50, no. 7, pp. 2093–2104, 2020.
- [89] R. V. K. Reddy and U. R. Babu, “Handwritten Hindi Character Recognition using Deep Learning Techniques,” *Int. J. Comput. Sci. Eng.*, vol. 7, no. 2,

- pp. 1–7, 2019.
- [90] F. Chollet, *Deep Learning with Python*. Manning Shelter Island, 2021.
  - [91] S. Bock, J. Goppold, and M. Weiß, “An Improvement of the Convergence Proof of The ADAM-Optimizer,” Apr. 2018.
  - [92] A. R. Isnain, A. Sihabuddin, and Y. Suyanto, “Bidirectional Long Short Term Memory Method and Word2vec Extraction Approach for Hate Speech Detection,” *IJCCS (Indonesian J. Comput. Cybern. Syst.)*, vol. 14, no. 2, p. 169, 2020.
  - [93] J. Li, Y. Xu, and H. Shi, “Bidirectional LSTM with Hierarchical Attention for Text Classification,” in *Proceedings of 2019 IEEE 4th Advanced Information Technology, Electronic and Automation Control Conference, IAEAC 2019*, 2019, pp. 456–459.
  - [94] B. V. Thummadi and S. Paruchuri, “Presence of Location-Based Agglomeration Effects in Open Source Communities: An Empirical Test on Github,” *Acad. Manag. Discov.*, Mar. 2021, doi: 10.5465/amd.2019.0255.
  - [95] J. Shuja, E. Alanazi, W. Alasmari, and A. Alashaikh, “COVID-19 Open Source Data Sets: A Comprehensive Survey,” *Appl. Intell.*, vol. 51, no. 3, pp. 1296–1325, Mar. 2021, doi: 10.1007/s10489-020-01862-6.
  - [96] R. Chandra and A. Krishna, “COVID-19 Sentiment Analysis via Deep Learning during The Rise of Novel Cases,” *PLoS One*, vol. 16, no. 8, p. e0255615, Aug. 2021.
  - [97] K. Arunkumar, G. Preethi, and K. Vasanth, “A Study of Fake News Detection using Machine Learning Algorithms,” *Int. J. Technol. Eng. Syst.*, vol. 11, no. 1, pp. 1–7, 2020, Accessed: Jan. 17, 2022. [Online]. Available: [www.ijcns.com](http://www.ijcns.com).
  - [98] Coolsonn, “Covid19\_Twitter\_Analysis: Project Focused on Creation of Machine Learning Model for Classifying Tweets about COVID-19 for Real and Fake-News.,” *Github*, 2021. [https://github.com/Coolsonn/covid19\\_twitter\\_analysis/tree/main/Fake\\_News\\_Detection/fake\\_news\\_data](https://github.com/Coolsonn/covid19_twitter_analysis/tree/main/Fake_News_Detection/fake_news_data) (accessed Jan. 17, 2022).
  - [99] S. Abuqran, “Arabic Multi-Topic Labelling using Bidirectional Long Short-Term Memory,” in *2021 12th International Conference on Information and Communication Systems, ICICS 2021*, 2021, pp. 492–494.
  - [100] T. Dwi Antoko, M. Azhar Ridani, and A. Eko Minarno, “Klasifikasi Buah Zaitun Menggunakan Convolution Neural Network,” *Komputika J. Sist. Komput.*, vol. 10, no. 2, pp. 119–126, 2021, doi: 10.34010/komputika.v10i2.4475.
  - [101] S. Raschka, J. Patterson, and C. Nolet, “Machine Learning in Python: Main Developments and Technology Trends in Data Science, Machine Learning, and Artificial Intelligence,” *Information (Switzerland)*, vol. 11, no. 4. Multidisciplinary Digital Publishing Institute, p. 193, Apr. 04, 2020, doi: 10.3390/info11040193.
  - [102] G. Piatetsky, “Python Leads The 11 Top Data Science, Machine Learning Platforms: Trends and Analysis,” *KDnuggets*, 2019.

- <https://www.kdnuggets.com/2019/05/poll-top-data-science-machine-learning-platforms.html> (accessed Jan. 17, 2022).
- [103] JasonKessler, “Scattertext: Beautiful Visualizations of How Language Differs among Document Types,” *Github*, 2017. <https://github.com/JasonKessler/scattertext> (accessed Jan. 17, 2022).
- [104] Tal, “Display / Render an HTML file inside Jupyter Notebook on Google Colab Platform,” *Stack Overflow*, 2019. <https://stackoverflow.com/questions/51576756/display-render-an-html-file-inside-jupyter-notebook-on-google-colab-platform> (accessed Jan. 17, 2022).
- [105] Scikit Learn, “Sklearn.utils.resample — scikit-learn 1.0.2 documentation,” *Scikit Learn*, 2021. <https://scikit-learn.org/stable/modules/generated/sklearn.utils.resample.html> (accessed Jan. 17, 2022).
- [106] A. Chauhan, “Scraping Tweets and Analyzing Social Sentiments,” *Towards Data Science*, 2018. <https://towardsdatascience.com/selenium-tweepy-to-scrap-tweets-from-tweeter-and-analysing-sentiments-1804db3478ac> (accessed Jan. 17, 2022).
- [107] A. Sharma, “What Are Lambda Functions | Lambda Function In Python,” *Analytics Vidhya*, 2020. <https://www.analyticsvidhya.com/blog/2020/03/what-are-lambda-functions-in-python/> (accessed Jan. 17, 2022).
- [108] Scikit Learn, “Sklearn.model\_selection.StratifiedShuffleSplit — scikit-learn 1.0.2 documentation,” *Scikit Learn*, 2021. [https://scikit-learn.org/stable/modules/generated/sklearn.model\\_selection.StratifiedShuffleSplit.html](https://scikit-learn.org/stable/modules/generated/sklearn.model_selection.StratifiedShuffleSplit.html) (accessed Jan. 17, 2022).
- [109] D. Bizopoulos, “Using Tokenizer with num\_words · Issue #8092,” *Github*, 2017. <https://github.com/keras-team/keras/issues/8092> (accessed Jan. 17, 2022).
- [110] Tensorflow, “Tf.keras.preprocessing.sequence.pad\_sequences,” *Tensorflow*, 2021. [https://www.tensorflow.org/api\\_docs/python/tf/keras/preprocessing/sequence/pad\\_sequences](https://www.tensorflow.org/api_docs/python/tf/keras/preprocessing/sequence/pad_sequences) (accessed Jan. 17, 2022).
- [111] Vamshi, “Each time I run the Keras, I get different result. · Issue #2743 · keras-team/keras,” *Github*, 2019. <https://github.com/keras-team/keras/issues/2743> (accessed Jan. 17, 2022).
- [112] V. Choubey, “Text Classification using CNN,” *Medium*, 2020. <https://medium.com/voice-tech-podcast/text-classification-using-cnn-9ade8155dfb9> (accessed Jan. 17, 2022).
- [113] Keras, “Working with RNNs,” *Keras*, 2019. [https://keras.io/guides/working\\_with\\_rnns/](https://keras.io/guides/working_with_rnns/) (accessed Jan. 17, 2022).
- [114] T. Shin, “Understanding the Confusion Matrix and How to Implement it in Python,” *Towards Data Science*, 2020. <https://towardsdatascience.com/understanding-the-confusion-matrix-and-how-to-implement-it-in-python-319202e0fe4d> (accessed Jan. 17, 2022).

- [115] Rasoul, “Scikit-learn: How to obtain True Positive, True Negative, False Positive and False Negative,” *Stack Overflow*, 2019. <https://stackoverflow.com/questions/31324218/scikit-learn-how-to-obtain-true-positive-true-negative-false-positive-and-fal> (accessed Jan. 17, 2022).



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