



## REFERENCES

- Abadi, M., Agarwal, A., Barham, P., Brevdo, E., Chen, Z., Citro, C., Corrado, G. S., Davis, A., Dean, J., Devin, M., Ghemawat, S., Goodfellow, I., Harp, A., Irving, G., Isard, M., Jia, Y., Jozefowicz, R., Kaiser, L., Kudlur, M., ... Zheng, X. (2016). TensorFlow: Large-Scale Machine Learning on Heterogeneous Distributed Systems.
- Agarap, A. F. (2019). Deep Learning using Rectified Linear Units (ReLU).
- ALRashdi, R., & O'Keefe, S. (2019, March 26). Deep Learning and Word Embeddings for Tweet Classification for Crisis Response. Retrieved from <https://arxiv.org/abs/1903.11024>
- Bhere, Pradip & Upadhyay, Anand & Chaudhari, Ketan & Ghorpade, Tushar. (2020). Classifying Informatory Tweets during Disaster Using Deep Learning. ITM Web of Conferences. 32. 03025. 10.1051/itmconf/20203203025.
- Bryan Wilie, , Karissa Vincentio, Genta Indra Winata, Samuel Cahyawijaya, X. Li, Zhi Yuan Lim, S. Soleman, R. Mahendra, Pascale Fung, Syafri Bahar, and A. Purwarianti. "IndoNLU: Benchmark and Resources for Evaluating Indonesian Natural Language Understanding." . In *Proceedings of the 1st Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 10th International Joint Conference on Natural Language Processing*.2020.
- Caragea, C., Silvescu, A., & Tapia, A. (2016). Identifying informative messages in disaster events using Convolutional Neural Networks: Semantic Scholar. Retrieved from <https://www.semanticscholar.org/paper/Identifying-informative-messages-in-disaster-events-Caragea-Silvescu/0f64190c810911dde19920bd30d675ec64ed0893>
- Chollet, F., & others. (2015). Keras. GitHub. <https://github.com/fchollet/keras>
- Devlin, J., Chang, M., Lee, K., & Toutanova, K. (2019, May 24). BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding. Retrieved from <https://arxiv.org/abs/1810.04805>
- Gupta, V., & Lehal, G. S. (2009). A Survey of Text Mining Techniques and Applications: Semantic Scholar. Retrieved from <https://www.semanticscholar.org/paper/A-Survey-of-Text-Mining-Techniques-and-Applications-Gupta-Lehal/a3124650908b88c9b2e03b0add30464ef77c11ce>
- Harish, B S & Guru, Devanur & Shantharamu, Manjunath. (2010). Representation and Classification of Text Documents: A Brief Review. International Journal of Computer Applications,Special Issue on RTIPPR. 1. 110 - 119.
- Hidayatullah, A., & Ma'arif, M. R. (2017). Pre-processing Tasks in Indonesian Twitter Messages: Semantic Scholar. Retrieved from <https://www.semanticscholar.org/paper/Pre-processing-Tasks-in-Indonesian-Twitter-Messages-Hidayatullah-Ma'arif/100a0ff6f7f0cbaebf8c9b0306c706a0969b681f>



Hotho, Andreas & Nürnberg, Andreas & Paass, Gerhard. (2005). A Brief Survey of Text Mining. LDV Forum - GLDV Journal for Computational Linguistics and Language Technology. 20. 19-62.

Hunter, J. D. (2007). Matplotlib: A 2D graphics environment. Computing in Science & Engineering, 9(3), 90–95. <https://doi.org/10.1109/MCSE.2007.55>

Imran, Muhammad & Elbassuoni, Shady & Castillo, Carlos & Diaz, Fernando & Meier, Patrick. (2013). Extracting Information Nuggets from Disaster-Related Messages in Social Media. Conference: The 10th International Conference on Information Systems for Crisis Response and Management (ISCRAM)

Jawahar, G., Sagot, B., & Seddah, D. (n.d.). What Does BERT Learn about the Structure of Language? Retrieved from <https://www.aclweb.org/anthology/P19-1356/>

Jouppi, N., et al. "In-Datacenter Performance Analysis of a Tensor Processing Unit: Semantic Scholar." (2016, June 26). Retrieved from, [www.semanticscholar.org/paper/In-datacenter-performance-analysis-of-a-tensor-unit-Jouppi-Young/2dfab5a90abc49ab2a80a492a01a4e2c8e92ec22](http://www.semanticscholar.org/paper/In-datacenter-performance-analysis-of-a-tensor-unit-Jouppi-Young/2dfab5a90abc49ab2a80a492a01a4e2c8e92ec22).

Kim, Y. (2014, September 03). Convolutional Neural Networks for Sentence Classification. Retrieved from <https://arxiv.org/abs/1408.5882>

Kingma, Diederik P., and Jimmy Ba. "Adam: A Method for Stochastic Optimization: Semantic Scholar." (2015). Retrieved from, [www.semanticscholar.org/paper/Adam:-A-Method-for-Stochastic-Optimization-Kingma-Ba/a6cb366736791bcccc5c8639de5a8f9636bf87e8](http://www.semanticscholar.org/paper/Adam:-A-Method-for-Stochastic-Optimization-Kingma-Ba/a6cb366736791bcccc5c8639de5a8f9636bf87e8).

Luthfitama, T. R. (2019, July 04). *Pengenalan Entitas Bernama Pada Tweet Tentang Bencana Menggunakan Conditional Random Field*.

S. Madichetty and M. Sridevi, "Detecting Informative Tweets during Disaster using Deep Neural Networks," *2019 11th International Conference on Communication Systems & Networks (COMSNETS)*, Bengaluru, India, 2019, pp. 709-713, doi: 10.1109/COMSNETS.2019.8711095.

Madichetty, S., & M, S. (2020, April 16). Improved Classification of Crisis-Related Data on Twitter using Contextual Representations. Retrieved from <https://www.sciencedirect.com/science/article/pii/S1877050920308619>

Madichetty, Sreenivasulu & Sridevi, M. (2019). Detecting Informative Tweets during Disaster using Deep Neural Networks. 709-713. 10.1109/COMSNETS.2019.8711095.

McKinney, W., & others. (2010). Data structures for statistical computing in python. Proceedings of the 9th Python in Science Conference, 445, 51–56.

Mikolov, T., Sutskever, I., Chen, K., Corrado, G., & Dean, J. (2013, October 16). Distributed Representations of Words and Phrases and their Compositionality. Retrieved from



Mikolov, T., Chen, K., Corrado, G., & Dean, J. (2013, September 07). Efficient Estimation of Word Representations in Vector Space. Retrieved from <https://arxiv.org/abs/1301.3781>

Nguyen, D. T., Mannai, K. A., Joty, S., Sajjad, H., Imran, M., & Mitra, P. (2016, August 12). Rapid Classification of Crisis-Related Data on Social Networks using Convolutional Neural Networks. Retrieved from <https://arxiv.org/abs/1608.03902>

Oliphant, T. (2006). Guide to NumPy.

P., R. D., Faticahah, C., & Purwitasari, D. (2017). Deteksi Gempa Berdasarkan Data Twitter Menggunakan Decision Tree, Random Forest, dan SVM. Retrieved from <https://www.neliti.com/publications/193136/deteksi-gempa-berdasarkan-data-twitter-menggunakan-decision-tree-random-forest-d>

Parilla-Ferrer, Beverly & Fernandez, Proceso & IV, Jaime. (2014). Automatic Classification of Disaster-Related Tweets. Conference: International conference on Innovative Engineering Technologies (ICIET'2014)

Rehurek, R., & Sojka, P. (2011). Gensim—python framework for vector space modelling. NLP Centre, Faculty of Informatics, Masaryk University, Brno, Czech Republic, 3(2).

Romascanu, Andrei, et al. "Using Deep Learning and Social Network Analysis to Understand and Manage Extreme Flooding." Wiley Online Library, John Wiley & Sons, Ltd, 29 Sept. 2020, [onlinelibrary.wiley.com/doi/abs/10.1111/1468-5973.12311](https://onlinelibrary.wiley.com/doi/abs/10.1111/1468-5973.12311).

S, J. M., & A, A. P. (2020, November 11). NIT COVID-19 at WNUT-2020 Task 2: Deep Learning Model RoBERTa for Identify Informative COVID-19 English Tweets. Retrieved from <https://arxiv.org/abs/2011.05551>

Smith, N. A. (2020, April 17). Contextual Word Representations: A Contextual Introduction. Retrieved from <https://arxiv.org/abs/1902.06006>

Srivastava, N., Hinton, G., Krizhevsky, A., Sutskever, I., & Salakhutdinov, R. (2014). Dropout: A Simple Way to Prevent Neural Networks from Overfitting. *Journal of Machine Learning Research*, 15(56), 1929–1958. <http://jmlr.org/papers/v15/srivastava14a.html>

Van Quan Nguyen, T. N. (n.d.). Real-time event detection using recurrent neural network in social sensors - Van Quan Nguyen, Tien Nguyen Anh, Hyung-Jeong Yang, 2019. Retrieved from <https://journals.sagepub.com/doi/full/10.1177/1550147719856492>

Vijayarani, S., Ilamathi, J., & Nithya, S. (2015). Preprocessing Techniques for Text Mining-An Overview Dr. Retrieved from <https://www.semanticscholar.org/paper/Preprocessing-Techniques-for-Text-Mining-An-Dr-Vijayarani-Ilamathi/1fa11c4de09b86a05062127c68a7662e3ba53251>



## Classifying Natural Disaster Tweet using a Convolutional Neural Network and BERT Embedding

LUCAS S. AJI DHARMA, Drs. Edi Winarko, M.Sc., PhD

Universitas Gadjah Mada, 2021 | Diunduh dari <http://etd.repository.ugm.ac.id/>

UNIVERSITAS  
GADJAH MADA

Wolf, T., Debut, L., Sanh, V., Chaumond, J., Delangue, C., Moi, A., Cistac, P., Rault, T., Louf, R., Funtowicz, M., Davison, J., Shleifer, S., von Platen, P., Ma, C., Jernite, Y., Plu, J., Xu, C., Scao, T. L., Gugger, S., ... Rush, A. M. (2020). HuggingFace's Transformers: State-of-the-art Natural Language Processing.

Yates, D., & Paquette, S. (2010, November 24). Emergency knowledge management and social media technologies: A case study of the 2010 Haitian earthquake. Retrieved from  
<https://www.sciencedirect.com/science/article/abs/pii/S0268401210001453?via=ihub>

Yong-feng, Shi & Yan-ping, Zhao. (2004). Comparison of text categorization algorithms. Wuhan University Journal of Natural Sciences. 9. 10.1007/BF02831684.