

СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

- 1) Ilkay A., Amarnath G.: Working with Streaming Data [Electronic Resource] / Ilkay A., Amarnath G. // Big Data Modeling and Management Systems – Electronic Data. – [San Diego: University of California San Diego with Electronic Resource Coursera, 2012] – Mode of access: World Wide Web: <https://www.coursera.org/learn/big-data-management/home/week/4> (viewed on September 13, 2019). – Title from the screen.
- 2) Amazon Web Services, Inc: Amazon Kinesis [Electronic Resource] // Amazon Kinesis – Mode of access: World Wide Web: <https://aws.amazon.com/ru/kinesis/> (viewed on September 13, 2019). – Title from the screen.
- 3) The Apache Software Foundation, Licensed under the Apache License, Version 2.0. : Apache Software Foundation [Electronic Resource] // Apache Spark – Mode of access: World Wide Web: <https://www.apache.org/> (viewed on September 13, 2019). – Title from the screen.
- 4) The Apache Software Foundation, Licensed under the Apache License : Apache Storm [Electronic Resource] // Apache Storm – Mode of access: World Wide Web: <https://storm.apache.org/> (viewed on September 13, 2019). – Title from the screen.
- 5) The Apache Software Foundation, Licensed under the Apache License: Apache Flink [Electronic Resource] // Apache Flink – Mode of access: World Wide Web: <https://flink.apache.org/> (viewed on September 13, 2019). – Title from the screen.
- 6) The Apache Software Foundation, Licensed under the Apache License, Version 2.0. : Apache Spark [Electronic Resource] // Spark Streaming – Mode of access: World Wide Web: <https://spark.apache.org/> (viewed on September 13, 2019). – Title from the screen.
- 7) The Apache Software Foundation, Licensed under the Apache License: Apache Samza [Electronic Resource] // Apache Samza – Mode of access: World Wide Web: <http://samza.apache.org/> (viewed on September 13, 2019). – Title from the screen.

- 8) Advanced Software Products Group: The Three States of Digital Data [Electronic Resource]: – Mode of access: World Wide Web: <http://aspg.com/three-states-digital-data/#.XeJ2t-gza00> (viewed on September 14, 2019). – Title from the screen.
- 9) Facebook [Electronic Resource]: We believe in the potential of people when they can come together – Mode of access: World Wide Web: <https://about.fb.com/> (viewed on September 14, 2019). – Title from the screen.
- 10) Twitter [Electronic Resource]: <https://about.twitter.com/> Mode of access: World Wide Web: <https://about.fb.com/> (viewed on September 14, 2019). – Title from the screen.
- 11) Ying Lin: 10 Twitter Statistics Every Marketer Should Know in 2019 [Electronic Resource] – : 10 Twitter Statistics Every Marketer Should Know in 2019 [Infographic] Mode of access: World Wide Web: <https://www.oberlo.com/blog/twitter-statistics> (viewed on September 14, 2019). – Title from the screen.
- 12) Korobov M.: Morphological Analyzer and Generator for Russian and Ukrainian Languages [Electronic Resource] – Mode of access: World Wide Web: <https://arxiv.org/pdf/1503.07283v1.pdf> (viewed on September 16, 2019). – Title from the screen.
- 13) Open Corpora [Electronic Resource] – Mode of access: World Wide Web: <http://opencorpora.org/> (viewed on September 16, 2019). – Title from the screen.
- 14) Language Tool [Electronic Resource] – Mode of access: World Wide Web: <https://languagetool.org/> (viewed on September 16, 2019). – Title from the screen.
- 15) Олег Бунін: Як вирішити 90% задач з NLP [Electronic Resource] – Mode of access: World Wide Web: <https://habr.com/ru/company/oleg-bunin/blog/352614/> (viewed on September 16, 2019). – Title from the screen.
- 16) Frakes, W. B. Stemming algorithms, Information retrieval – 1992 – data structures and algorithms – Upper Saddle River – NJ: Prentice-Hall, Inc.

- 17) Saurav Jain: Introduction to Stemming – [GeeksForGeeks: a computer science portal for geeks] – Mode of access: World Wide Web: <https://www.geeksforgeeks.org/introduction-to-stemming/> (viewed on September 16, 2019). – Title from the screen.
- 18) Jocelyn D'Souza: An Introduction to Bag-of-Words in NLP [Electronic Resource] – Mode of access: World Wide Web: <https://medium.com/greyatom/an-introduction-to-bag-of-words-in-nlp-ac967d43b428> (viewed on September 16, 2019). – Title from the screen.
- 19) H. Wu and R. Luk and K. Wong and K. Kwok: "Interpreting TF-IDF term weights as making relevance decisions". ACM Transactions on Information Systems, 26 (3). 2008.
- 20) Akash Panchal: Text Summarization using NLTK: TF-IDF Algorithm [Electronic Resource] – Mode of access: World Wide Web: <https://towardsdatascience.com/text-summarization-using-tf-idf-e64a0644ace3> (viewed on September 16, 2019). – Title from the screen.
- 21) Jiawei Han and Micheline Kamber and Jian Pei: Data Mining: Concepts and Techniques (3rd) – ISBN: 9780123814791 (2011)
- 22) В.П. Шкодырев, К.И. Ягафаров, В.А. Баштовенко, Е.Э. Ильина: Обзор методов обнаружения аномалий [Электроний ресурс] - Режим доступа: http://ceur-ws.org/Vol-1864/paper_33.pdf
- 23) Hodge, V. and Austin, J., 2004. A survey of outlier detection methodologies. Artificial intelligence review, 22(2), pp.85-126.
- 24) Angiulli, F. and Pizzuti, C., 2002, August. Fast outlier detection in high dimensional spaces. In European Conference on Principles of Data Mining and Knowledge Discovery, pp. 15-27.
- 25) Kannan, R., Woo, H., Aggarwal, C.C. and Park, H., 2017, June. Outlier detection for text data. In Proceedings of the 2017 SIAM International Conference on Data Mining, pp. 489-497. Society for Industrial and Applied Mathematics.

- 26) Ramaswamy, S., Rastogi, R. and Shim, K., 2000, May. Efficient algorithms for mining outliers from large data sets. *ACM SIGMOD Record*, 29(2), pp. 427-438.
- 27) Chandola, V., Banerjee, A. and Kumar, V., 2009. Anomaly detection: A survey. *ACM computing surveys* , 41(3), p.15.
- 28) Chawla, S. and Chandola, V., 2011, Anomaly Detection: A Tutorial. Tutorial at ICDM 2011.
- 29) Top 10 anomaly detection Software [Electronic Resource] – Mode of access: World Wide Web: <https://www.predictiveanalyticstoday.com/top-anomaly-detection-software/> (viewed on September 20, 2019). – Title from the screen.
- 30) Numeta [Electronic Resource] – Mode of access: World Wide Web: <https://numenta.com/> (viewed on September 20, 2019). – Title from the screen.
- 31) Rapid Miner [Electronic Resource] – Mode of access: World Wide Web: <https://rapidminer.com/>
- 32) Zhiguo Ding, MinruiFei: An Anomaly Detection Approach Based on Isolation Forest Algorithm for Streaming Data using Sliding Window. *IFAC Proceedings Volumes. Volume 46, Issue 20, 2013, Pages 12-17.*
- 33) Liu, F.T., Ting, K.M. and Zhou, Z.H., 2008, December. Isolation forest. In *International Conference on Data Mining*, pp. 413-422. IEEE.
- 34) Tomashevskii, V.M., Oliynik, Y.O., Yaskov, V.V., Romanchuk, V.M.: Realtime text stream anomalies analysis system. *Visnyk of Kherson National Technical University*, vol. 66, no. 3, pp. 361–366 (2018)
- 35) Python [Електронний ресурс] – <https://www.python.org/>
- 36) Pandas [Електронний ресурс] – <https://pandas.pydata.org/>
- 37) Lakshay Arora: An Awesome Tutorial to Learn Outlier Detection in Python using PyOD Library [Електронний ресурс] – Mode of access: World Wide Web: <https://www.analyticsvidhya.com/blog/2019/02/outlier-detection-python-pyod/>

- 38) Practice Problem: Big Mart Sales III [Dataset] – Mode of access: World Wide Web: https://datahack.analyticsvidhya.com/contest/practice-problem-big-mart-sales-iii/?utm_source=outlierdetectionpyod&utm_medium=blog
- 39) О.Є. Афанасьєва, Ю.О. Олійник // Матеріали III всеукраїнської науково-практичної конференції молодих вчених та студентів «Інформаційні системи та технології управління» (ІСТУ-2019) – м. Київ: НТУУ «КПІ ім. Ігоря Сікорського», 20-22 листопада 2019 р.