

REFERENCES

- [1] Yoshida, K. 1991. "Speech Recognition System". *Journal of the Japan Society for Precision Engineering* 57, no.11: 1924-1927.
- [2] Levitan, S.I., Mishra, T., and Bangalore, S. 2016. "Automatic identification of Gender from Speech". In *Proceedings of the International Conference on Speech Prosody, January, 2016*, by International Speech Communications Association, 84-88.
- [3] Måhl, Lena. No Date. "Speech Recognition and Adaptation Experiments on Children's Speech". *KTH, Stockholm, Sweden*. February 2003 <<http://www.speech.kth.se/prod/publications/files/1671.pdf>> .
- [4] Bastanlar, Y., and Ozuysal, M. 2014. "Introduction to Machine Learning". *Methods in Molecular Biology* 1107 (October): 105-128.
- [5] Boyarshinov, V. 1997. "Machine Learning". *Computer* 2005 (April): 412-414.
- [6] Karhunen, J., and Joutsensalo, J. 1995. "Generalizations of Principal Component Analysis, Optimization Problems, and Neural Networks". *Neural Networks* 8.no.4: 549-562.
- [7] Chagas, B., Redmiles, D., and De Souza, S. 2017. "End-user Development for the Internet of Things or How can a (smart) Light Bulb be So Complicated?". In *Proceedings of IEEE Symposium on Visual Languages and Human-Centric Computing, VL/HCC, October 13-16, 2017* by IEEE Computer Society, 273-277.
- [8] Oettinger, A.G., 1965. "Computational Linguistics". *The American Mathematical Monthly* 72. no.2: 145-148.
- [9] Rai, P., and Khanna, P. 2015. "Appearance Based Gender Classification with PCA and (2D)2 PC A on Approximation Face Image". In *9th International Conference on Industrial and Information Systems, ICIIS 2014* by Institute of Electrical and Electronics Engineers Inc, 1-6.
- [10] Mori, R.D., 1983. *Computer Models of Speech Using Fuzzy Algorithms, Computer Models for Speech Understanding*, Springer US.
- [11] Zellner, B.F. 1994. *Fundamentals of Speech Synthesis and Speech Recognition Basic Concepts State of the Art and Future Challenges*, Wiley.
- [12] Huang, X., Acero, A., and Hon, H. 2001. *Spoken Language Processing_ A*

- Guide to Theory, Algorithm, and System Development*, Prentice Hall PTR Prentice-Hall, Inc.
- [13] Vorperian, H., Kent, R. 2007. "Vowel Acoustic Space Development in Children: A Synthesis of Acoustic and Anatomic Data". *Journal of Speech, Language, and Hearing Research* 50, no.6: 1510-1545.
 - [14] Potamianos, A., and Narayanan, S. 2003. "Robust Recognition of Children's Speech". *IEEE Transactions on Speech and Audio Processing* 11, no.6: 603-616.
 - [15] Lee, Li., and Richard, C. 1996. "Speaker Normalization Using Efficient Frequency Warping Procedures". In *CASSP, IEEE International Conference on Acoustics, Speech and Signal Processing – Proceedings, May 9-9, 1996*, by Institute of Electrical and Electronic Engineers, 353-356.
 - [16] Benzeghiba, M., De, M.R., and Deroo, O et al. 2007. "Automatic Speech Recognition and Speech Variability: A review ". *Speech Communication* 49, no.10-11(February): 763-786.
 - [17] Lin,F., Wu, Y., and Zhuang Y et al. 2015. "Human Gender Classification: A Review". *International Journal of Biometrics* 8, no.34 (July): 275-300.
 - [18] Bruce, V., Burton, A., and Hanna, E. 1993. "Sex Discrimination: How Do We Tell the Difference between Male and Female Faces?". *Perception* 22, no.2 (February) : 131-152.
 - [19] Hill, H., and Johnston, A. 2001. "Categorizing Sex and Identity from the Biological Motion of Faces". *Current Biology* 11, no.11 (June): 880-885.
 - [20] O' Toole, A., Roark, D., and Abdi, H. 2002. " Recognizing Moving Faces: A Psychological and Neural Synthesis ". *Trends in Cognitive Sciences* 6, no.6 (June): 261-266.
 - [21] Golomb, B., Sejnowski, A., 1995. *Applications of Neural Networks, Sex Recognition from Faces Using Neural Networks*. Howard Hughes Medical Institute The Salk Institute 10010 North Torrey Pines Road La Jolla, CA 92037.
 - [22] Thomas, V., Chawla, N., and Bowyer, K et al. 2017. "Learning to Predict Gender from Iris Images". In *IEEE Conference on Biometrics: Theory, Applications and Systems, BTAS'07*, by Institute of Electrical and

Electronic Engineers.

- [23] Afifi, M. 2019. "11K Hands: Gender Recognition and Biometric Identification Using a Large Dataset of Hand Images". *Multimedia Tools and Applications* 78, no.15 (September):20835-20854.
- [24] Dong, Y., and Woodard, D. 2011. "Eyebrow Shape-based Features for Biometric Recognition and Gender Classification: A Feasibility Study". In *2011 International Joint Conference on Biometrics, IJCB 2011, October 11-13, 2011*, by Institute of Electrical and Electronic Engineers.
- [25] Nguyen, P., Tran, D., and Xuang, X. et al. 2013. "Age and Gender Classification Using EEG Paralinguistic Features". In *International IEEE/EMBS Conference on Neural Engineering, NER, November 6-8, 2013*, by Institute of Electrical and Electronic Engineers.
- [26] Tripathy, R.K., Acharya, A., and Choudhary, S.K. 2012. "Gender Classification from ECG Signal Analysis using Least Square Support Vector Machine ". *American Journal of Signal Processing* 2, no.5 (February): 145-149.
- [27] Wisom, B., and Todd, P. 2015. "A Theoretical Integration of User Satisfaction and Technology Acceptance". *Information Systems Research* 16, no.1 (January): 85-102.
- [28] Tapia, J., Perez, C., and Bowyer, K. 2015. "Gender Classification from Iris Images Using Fusion of Uniform Local Binary Patterns" . *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* 8926 (March): 751-763.
- [29] Pannu, A., and Student, M.T. 2008. "Artificial Intelligence and its Application in Different Areas". *Certified International Journal of Engineering and Innovative Technology* 4, no.10 (April): 2277-3754.
- [30] Pandit, H., and Shah, D. 2012. "The Model For Extracting A Portion Of a Given Image Using Color Processing". *International Journal of Engineering Research & Technology (IJERT)* 1, no.10 (December): 173-178.
- [31] Durrant, R., and Kaban, A. 2010. "Compressed Fisher Linear Discriminant analysis: Classification of Randomly Projected Data". In *Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining 25–28 July 2010*, by Association for Computing

- Machinery, New York, NY, USA.
- [32] Abdi, H., and Williams, L. 2010. "Principal Component Analysis". *Wiley Interdisciplinary Reviews: Computational Statistics* 2, no.4 (July): 433-459.
 - [33] Donahue, J., Jia, Y., and Vinyals, O. 2014. "DeCAF: A Deep Convolutional Activation Feature for Generic Visual Recognition". In *1st International Conference on Machine Learning, ICML 2014, by International Machine Learning Society (IMLS) May 14-15, 2014*, 988-996.
 - [34] Szegedy, C., Liu, W., and Jia, Y. 2015. "Going Deeper with Convolutions". *Journal of Chemical Technology and Biotechnology* 91, no.8 (September): 2322-2330.
 - [35] Krishevsky, A., Sutskever, I., and Hinton G. 2017. "ImageNet Classification with Deep Convolutional Neural Networks". *Communications of the ACM* 60, no.6 (March): 84-90.
 - [36] Tivive, F., and Bouzerdoun, A. 2006. "A Gender Recognition System Using Shunting Inhibitory Convolutional Neural Networks". In *IEEE International Conference on Neural Networks - Conference Proceedings, July 16-21, 2006*, by Faculty of Engineering and Information Sciences, 5336-5341.
 - [37] Gharehchopogh, F., Khaze, S., and Maleki, I. 2015. "A New Approach in Bloggers Classification with Hybrid of K-nearest Neighbor and Artificial Neural Network Algorithms". *Indian Journal of Science and Technology* 8, no.3 (February): 237-246.
 - [38] Xie, Z., Gou, Z., and Qian, C. 2018. "Palmprint Gender Classification by Convolutional Neural Network". *IET Computer Vision* 12, no.4 (June): 476-483.
 - [39] Fawaz, S.A., and Dia, A. 2017. "Introduction to Artificial Neural Network (ANN) Methods: What They are and How to Use Them". *Acta Chimica Slovenica* 41 (September): 327-327.
 - [40] Das, D., Nix, D., and Picheny, M. 1998. "Improvements in Children's Speech Recognition Performance". In *Proceedings of the 1998 IEEE International Conference on Acoustics, Speech and Signal Processing, ICASSP 98, May 15-15, 1998*, by Institute of Electrical and Electronics Engineers. Seattle, WA, USA, USA, 433-436.

- [41] Perrachione, T., Tufo, S.D, Gabrieli et al. 2011. "Human Voice Recognition Depends on Language Ability". *Science* 333, no.6042 (July): 595.
- [42] Kessler, S., and Aleixandre, V. 1978. "Human Voice". *The Iowa Review* 9, no.1: 59-59.
- [43] Lee, S., Potamianos, A., and Narayanao, S. 1999. "Acoustics of Children's Speech: Developmental Changes of Temporal and Spectral Parameters". *The Journal of the Acoustical Society of America* 105, no.3 (March): 1455-1488.
- [44] Kazemzadeh, A., You H., and Iseli M et al. 2015. "TBALL Data Collection: the Making of a Young Children's Speech Corpus" . In *INTERSPEECH 2005 - Eurospeech, 9th European Conference on Speech Communication and Technology, Lisbon, Portugal, September 4-8, 2005*.
- [45] Kraljic, T., and Samuel, A. 2007. "Perceptual Adjustments to Multiple Speakers". *Journal of Memory and Language* 56, no.1 (January):1-15.
- [46] Kurzekar, P.K, Deshmukh, R.R, and Waghmare, B. 2014. "A Comparative Study of Feature Extraction Techniques for Speech Recognition System". *International Journal of Innovative Research in Science, Engineering and Technology* 3, no.12 (December): 95-99.
- [47] Bhimani, N.V. 2014. "Speaker Recognition System Based on MFCC and VQ Algorithms". *International Journal of Engineering Research & Technology (IJERT)* 3, no.2 (February): 772-774.
- [48] Mueen, F., Ahmed, A., and Sanaullah et al. 2002. "Speaker Recognition Using Artificial Neural Networks". In *IEEE Students Conference, ISCON '02. Proceedings, August 16-17, 2002*, by Institute of Electrical and Electronics Engineers. Seattle, Lahore, Pakistan, Pakistan,99-102.
- [49] Ravikumar, K.M., Reddy, B., and Rajagopal, R. 2008. "Automatic Detection of Syllable Repetition in Read Speech for Objective Assessment of Stuttered Disfluencies". *World Academy of Science, Engineering and Technology International Journal of Electrical and Computer Engineering* 2,no.10 (January): 2142-2145.
- [50] Oliveira, M.O., Bretas, A.S.2009. "Application of Discrete Wavelet Transform for Differential Protection of Power Transformers". In *2009 IEEE Bucharest PowerTech, June 28-July 2, 2009*, by Institute of Electrical and Electronics Engineers. Bucharest, Romania, 349-369.

- [51] Campo, D., Quintero, O., and Bastidas M. 2016. "Multiresolution Analysis (Discrete Wavelet Transform) through Daubechies Family for Emotion Recognition in Speech". *Journal of Physics: Conference Series* 705, no.1 (December): 33-35.
- [52] Thakral, S., and Manhas, P. 2019. "Image Processing by Using Different Types of Discrete Wavelet Transform". *Communications in Computer and Information Science* 959, no.1 (May) ,499-507.
- [53] Breiman, L. 2001. "Statistical Modeling: The Two Cultures". *Statistical Science* 16, no.3: 199-231.
- [54] Abdalla M.T., Abobakr, H.M., and Gaafar,S et al. 2013. "DWT and MFCCs based Feature Extraction Methods for Isolated Word Recognition". *International Journal of Computer Applications* 69, no.20 (May): 21-25.
- [55] Ravikumar, K.M., Rajagopal, R., and Nagaraj, H.C. 2009. "An Approach for Objective Assessment of Stuttered Speech Using MFCC Features". *The International Congress for global Science and Technology, International Journal on Digital Signal Processing (DSP)* 9, no.1 (June): 19-24.
- [56] Kumar, R.D., Ganesh, A.B., and Sasikala, S. 2016. "Speaker identification system using Gaussian Mixture Model and Support Vector Machines (GMM-SVM) under noisy conditions". *Indian Journal of Science and Technology* 9, no.19 (May): 1-6.
- [57] Pondhu, L., and Kummari, G. 2018. "Performance Analysis of Machine Learning Algorithms for Gender Classification". In *Proceedings of the International Conference on Inventive Communication and Computational Technologies, April 20-21, 2018*, by 2nd International Conference on Inventive Communication and Computational Technologies. Coimbatore, India.
- [58] Karthikeyan, K., and Mala, D.R. 2018. "Content Based Audio Classifier & Feature Extraction Using Ann Techniques". *International Journal of Innovative Research in Advanced Engineering (IJIRAE)* 5, no.4 (April): 106-116.
- [59] Raahul, A., Sapthagiri, R.,and Pankaj, K et al. 2017. "Voice based gender classification using machine learning". *IOP Conference Series: Materials Science and Engineering* 263, no.4 (March):0-9.

- [60] Safavi, S. 2015. "Speaker Characterization using Adult and Children's Speech". School of Electronic, Electrical and Systems Engineering The University of Birmingham.
- [61] Kamble, B. 2016. "Speech Recognition Using Artificial Neural Network – A Review". *Int'l Journal of Computing, Communications & Instrumentation Engg. (IJCCIE)* 3, no.1:1-4.
- [62] Ramteke, P.B., Dixit, A., and Supanekar, S. 2018. "Gender Identification from Children's Speech". In *2018 Eleventh International Conference on Contemporary Computing (IC3)*, August 2-4, 2018, by Institute of Electrical and Electronic Engineers. Noida, India, 1-6.
- [63] Lee, W. 2016. "Gender- related Frequency Characteristics in Children ' s Speech". *ISAPh 2016 International Symposium on Applied Phonetics* 14 (March): 56-61.
- [64] Khan,S., Ahmad, M., and Nazir, M. 2014. "A Comparative Analysis of Gender Classification Techniques". *Middle - East Journal of Scientific Research* 20, no.1: 1-13.
- [65] Khan, S., Ahmad, M., and Nazir, M. 2016. "Human Gender Classification: a Review". *International Journal of Biometrics* 8, no.3/4 (January): 275.
- [66] Russell, S. J, Norvig.P. D. 2010. *Artificial Intelligence: A Modern Approach*. 3rd. ed. Malaysia: Pearson Education.
- [67] Nowozin, S., and Lampert, C. 2010. "Structured Learning and Prediction in Computer Vision". *Foundations and Trends in Computer Graphics and Vision* 6, no.3-4: 185-365.
- [68] Bastanlar,Y., and Ozuysal,M. 2014. "Introduction to Machine Learning". *Methods in Molecular Biology* 1107 (October): 105-128.
- [69] Kumar, J., Prabhakar, O., and Sahu, N. 2014. "Comparative Analysis of Different Feature Extraction and Classifier Techniques for Speaker Identification Systems: A Review". *International Journal of Innovative Research in Computer and Communication Engineering* 2, no.1 (January): 2760-2769.
- [70] Fayek, H., Lech, M., and Cavedon, L. 2017. "Evaluating Deep Learning Architectures for Speech Emotion Recognition". *Neural Networks* 92, Special Issue : 60-68.

- [71] Otterlo, M.V., Wiering, M. 2012. “*Reinforcement learning and markov decision processes*”. U.S.A.: Springer Verlag.
- [72] Zupan, J. 1994. “The Capacity of Mel Frequency Cepstral Coefficients for Speech Recognition”. *International Science Index, Computer and Informatics Engineering* 11, no.1 (June): 1100-1104.
- [73] Safavi, S., Russell, M., and Jancovic, P. 2018. “Automatic speaker, age-group and gender identification from children's speech”. *Computer Speech and Language* 50, no.9 (January): 141-156.
- [74] Fawaz,S.A., and Dia, A. 2017. “Introduction to Artificial Neural Network (ANN) Methods: What They are and How to Use Them”. *Acta Chimica Slovenica* 41 (September): 327-327.
- [75] Levitan, S.I., Mishra, T., and Bangalore, S. 2016. “Automatic identification of gender from speech”. In *Proceedings of the International Conference on Speech Prosody, January, 2016*, by International Speech Communications Association, 84-88.
- [76] Upadhyay, Y. 2019. “Introduction to FeedForward Neural Networks”. *Towards Data Science*. March 7 < <https://towardsdatascience.com/feed-forward-neural-networks>>
- [77] Gupta,P. 2017. “Decision Trees in Machine Learning”. *Towards Data Science*. May 18 < <https://towardsdatascience.com/decision-trees-in-machine-learning>>
- [78] Cutler,D., Edwards, T., Beard, K et al. 2007. “Random Forests For Classification In Ecology”. *Ecology* 88, no.11 (November): 2783-2792.
- [79] Sperandei, S. 2014. “Understanding Logistic Regression Analysis”. *Biochemical and Medical* 24, no.1 (February): 12-18.
- [80] Shubbendu, S., Vijay, S. 2013. “Applicability of Artificial Intelligence in Different Fields of Life”. *International Journal of Scientific Engineering and Research (IJSER)* 1, no.1 (September): 28-35.
- [81] Eberhardt, L., Breiwick, J. 2010. “Models for Population Growth Curves”. *ISRN Ecology* 2012 (November): 1-7.
- [82] Beh-Hur, A., Horn, D., and Siegelmann, H.T. 2001. “Support Vector Clustering”. *Journal of Machine Learning Research* 2, no.12 (January): 125-137.

- [83] Hsu,C., Chang, C., and Lin, C. 2008. “A Practical Guide to Support Vector Classification”. *BJU international* 101. no.1:1396-1400.
- [84] Yang, Y., Li, J., and Yang, Y. 2015. “ The Research of the Fast SVM Classifier Method”. In *2015 12th International Computer Conference on Wavelet Active Media Technology and Information Processing, ICCWAMTIP 2015, December 8-29, 2015*, by Institute of Electrical and Electronic Engineers. Chengdu, China 121-124.
- [85] Gupta,P. 2017. “Decision Trees in Machine Learning”. *Towards Data Science*. May 18 < <https://towardsdatascience.com/decision-trees-in-machine-learning>>
- [86] Eberhardt, L., and Breiwick, J. 2013. “Learning the Naive Bayes Classifier with Optimization Models”. *International Journal of Applied Mathematics and Computer Science* 23, no.4 (December): 787-795.
- [87] Chakrabarty, N. 2019. “Implementation of Gaussian Naives Bayes in Python from Scratch”. January 23 < <https://hackernoon.com/implementation-of-gaussian-naive-bayes-in-python-from-scratch>>