

Profile

1. Name: Dr. Kalyani Chetan Waghmare
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4. Contact Numbers: 8975284900
5. Institution: SCTR's Pune Institute of Computer
Technology, Pune
6. Date of Joining: 01/03/1999
7. Academic Qualification: Ph.D. in Computer Engineering
8. Work Experience (in chronological order): Teaching experience from 01/10/1999 to till
date
9. Professional Recognition/Award/Prize/Certificate, Fellowship: -
 - “Python for Data Science” NPTEL 4-Week course with silver medal and stood in first 5 % Topper.
 - 3-week Coursera course on “Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization” with grade 96.6%.
 - 4-week Coursera courses on “Neural Network and Deep Learning” with grade 97.4%.
 - 6-weeks Coursera course on “Machine Learning a case study approach” with grade 97%.
 - Completed “Accreditation and Outcome Based Learning” NPTEL 8 Weeks course with silver medal 80%.
 - Completed “Design and Analysis of Algorithms” NPTEL 8 Week course with elite + silver medal 65 %.
 - Completed “Outcome Based Pedagogic Principles for Effective Teaching” NPTEL 4 Weeks course with silver medal 80%.
 - Attended FDP on “Data Science & Machine Learning” 12th -18th Aug.2019 under the Pandit Madan Mohan Malviya National Mission for Teachers and Teaching (PMMMNMTT).
 - Attended Workshop on Image and Signal Processing WISP- 2016 at IIIT Hyderabad on 24th Dec. 2016.



- Attended One week FDP on LATEX by IITB Bombay Spoken tutorial 11th- 15th May 2020.
- Attended One week FDP on Python by IITB Bombay Spoken tutorial 20th -25th April 2020.
- Completed IUCEE INTERNATIONAL ENGINEERING EDUCATOR CERTIFICATION PROGRAM (IIEECP)
- Attended International Conference on Transformation of Engineering Education on 1-2 Jan. 2024 at Hubli organized by KLE University in association with IUCEE.

10. Publications:

- a) K. C. Waghmare, B. A. Sonkamble, "Raga Identification Techniques for Classifying Indian Classical Music: A Survey," in 3rd International Conference on Signal Processing (ICOSP) at Florence, Italy Oct. 23rd- 25th, 2017, pp. 130-135.
- b) Kalyani C. Waghmare, Balwant A. Sonkamble, "Analyzing Acoustics of Indian Music Audio Signal Using Timbre and Pitch Features for Raga Identification," in IEEE 3rd International Conference on Imaging, Signal Processing and Communication (ICISPC) 2019, 27-29 July 2019 Singapore, pp.42-46.
- c) Kalyani C. Waghmare, Balwant A. Sonkamble, "Timbre with Note based features for improving performance of Music Classification," International Journal of Advanced Science and Technology, Vol. 29, No. 3, June 2020, pp. 10328-10338.
- d) Kalyani C. Waghmare, Balwant A. Sonkamble, "Machine Learning Algorithms for Indian Music Classification Based on Raga Framework," International Journal of Innovative Technology and Exploring Engineering (IJITEE) Sept. 2020, Vol. 9, Issue 11, pp. 130-134.
- e) Kalyani C. Waghmare, Balwant A. Sonkamble, "Modified K-Nearest Neighbor algorithm with Variant K," International Journal of Advanced Computer Science and Applications (IJACSA), Oct.2020, Vol. 11, No.10, pp.220-224.
- f) Kalyani C. Waghmare, Balwant A. Sonkamble, "Music Classification using Association Rule and K Nearest Neighbor," Journal of Engineering, Science and Technology (JESTEC), Aug. 2021, Volume 16, No. 4, pp.2876-2887.
- g) Kalyani C. Waghmare, Balwant A. Sonkamble, "An Algorithm to detect End Point of Indian Music Audio Samples," GIS SCIENCE JOURNAL, Dec. 2021, Volume8, No.12, pp.590-598. DOI: 20.18001.GSJ. 2021.V8I11.21.38364.

- h) Kumud Shende, Kalyani Waghmare, "Lifelong Learning Sentiment Classification of Continuously Increasing Data," in the Journal of Gujarat Research Society, Volume 21, Issue 01, pp.119-121.
 - i) Kumud Shende, Kalyani Waghmare, "Survey on Lifelong Learning for Large-Scale Social Media Sentiment Analysis," May 2019, Volume 6, Issue 5, pp.232-240.
 - j) Ritu Chaturvedi, Kalyani C. Waghmare, "Techniques for Facial Recognition System:Survey," Journal of emerging technologies and innovative research, JETIR April 2020, Vol. 7, Issue 4, pp. .
 - k) Ritu Chaturvedi, Kalyani C. Waghmare, "Human Expression Recognition on Indian Facial Database," GIS SCIENCE JOURNAL, Vol. 7, No.9, pp. 620-630.
 - l) Bagyashree Shelke, Kalyani Waghmare, "Heart disease prediction system using machine learning algorithms," Journal of emerging technologies and innovative research, JETIR, 2019 Vol. 6, issue 6, pp.250-254.
 - m) Kalyani Waghmare, Simpal Kawade, "A Survey on Identification of Emotion from Text Corpus," International Journal of Innovative Research in Computer and Communication Engineering, 2017, Vol. 5, issue 3, pp. 3882-3886.
 - n) A Mali, A Gala, K Waghmare, "Impact of Hybrid Sampling on ML-based Network Intrusion Detection Systems," IEEE, 2024 International Conference on Inventive Computation Technologies (ICICT), 24-26 April 2024, Lalitpur, Nepal, pp. 794-800. DOI: 10.1109/ICICT60155.2024.10544951.
10. Details of Patents (if any): Title of the invention : SYSTEM AND METHOD FOR IDENTIFYING SPEECH DISORDERS BY NATURAL LANGUAGE PROCESSING AND PROVIDING CORRECTIVE RECOMMENDATIONS, Application No.202321028902 A, published on 16/06/2023.
11. Books/Reports/Chapters/General Articles etc.:
12. Ongoing/completed Projects during the last 5 years: NIL
13. Consultancy Project sponsored by Industry: Artificial Intelligence based Personalized Recommendation System Case Study: Alleviation of Depression using Music Therapy Recommendations.

11. Organization of FDP/STTP

1. Coordinator for 3 times one-week online STTP on Developing Pedagogy for Effective Implementation of Outcome Based Education in Engineering Institutes sponsored by AQIS AICTE during A. Y. 2020-21.

2. Coordinator for One day faculty development program organized by P.I.C.T. in Association with SPPU on “Fundamental Data Structures” S.E. Computer Engg. 2020 syllabus of SPPU (3rd July, 2020).
3. Resource person in One day faculty development program organized by P.I.C.T. in Association with BOS Computer Engineering UOP on “Data Structures & Problem Solving “S.E. Computer Engg. 2012 revised syllabus of Pune University (10th July, 2013).
4. Committee member for organizing C-PGCON-2013 During 29th -& 30th March 2013 at PICT Pune.
5. Coordinator for Two Days State Level Workshop on “Research Trends in Machine Learning and Neural Network (RTMLNN-2012)” During 28th - 29th February 2012 at PICT, Pune.

12. Responsibilities Handled:

1. Chairman for various practical subjects at UG level like Programming Laboratory, Data Structure Laboratory, Data Structure and problem-solving Laboratory, RDBMS & Visual Programming Laboratory, Object Oriented & Modelling Design Laboratory at Second year, Third Year & Final Year exams.
2. Chairman/Paper setter/Examiner for various theory subjects at UG level like Data Structures and Algorithm, Advanced Data Structure, Data Structure and problem-solving, Database Management System.
3. Chairman/Paper setter/Examiner for various theory subjects at PG level like High Performance Databases, Data Mining Warehousing, Information Retrieval, Mathematical Foundation for Data Science.
4. Participated in syllabus setting for Data Structure and Algorithm subject at UG level during A.Y. 2000-2019.

13. Areas of Interest:

Machine Learning

Big Data Analytics

Recommendation Systems

Information Retrieval

14. Guided PG project

1. Intrusion detection system using data mining technique
2. Food image classification using Deep Learning

3. Human Expression Recognition and Sentiment Analysis
4. Heart disease prediction using Machine Learning
5. Time series hierarchy order