DR. RAJESH YAKKUNDIMATH

Professor & Head

Department of Computer Science & Engineering

K.L.E.Institute of Technology, Hubballi-580027, Karnataka

Cell :+(91)-9481126276

rajeshymath@gmail.com
rajesh.y@kleit.ac.in
hod_cse@kleit.ac.in

https://kleit.ac.in/wp-content/uploads/2024/04/Rajesh_biodata.pdf
https://www.adscientificindex.com/scientist/rajesh-yakkundimath/483209(Ranking)
Google scholar: https://scholar.google.com/citations?user=GLnBatwAAAAJ&hl=en
Scopus id: 56418569200
Vidwan id: 524631
Orchid id: 0000-0002-7858-4267

About

Area of Ph.D.: Computer Science & Engineering
Number of Publication till Date: 37
Number of Journal Publications till Date: 28
Number of Conference Publications till Date: 09
Google Scholar Citations: 1014
H-index: 16
i-10 index: 18
Number of Ph.D. adjucated: 05
Ph.D. Scholars Guided: 02
Ph.D. Scholars Guiding: 07
Number of Grants: 01
Number of Patents: 01
Number of KSCST project funded: 05
Number of Awards: 03

Academic Data:

Qualification	
	Ph.D. (Computer Science & Engineering) Visvesvaraya Technological University, Belgaum Department: Faculty of Computer & Information Sciences Year: 2017
	M. Tech. (Computer Science & Engineering) Basaveshwar Engineering College, Bagalkot Visvesvaraya Technological University, Belgaum Year: 2008
	B. E. (In.Technology) B.V. Bhoomaraddi College of Engineering and Technology, Hubli, V.T.U., Belgaum Year: 2004
Area of Interest	Image Processing & Pattern Recognition, Softcomputing Techniques, Artificial Intelligence & Machine Learning, Deep Learning

Ph.D. Students:

1) Visual Symptoms Based Classification of Paddy Diseases Using Deep Learning Techniques - Dr. Girish Saunshi (YOR:2019, Awarded)

2) Recognition and Classification of South Indian Sign Languages for Still Images and Video – Dr.Ramesh Badiger (YOR:2017, Awarded)

3) Identification, Differential Detection and Characterization of Pathogens In Pap Smear Images- Mrs. Varsha S, Jadhav(YOR:2018, Open Seminar Completed)

4) Methodologies for Enchancing the Chili Crop Yield by Weed Detection and Removal Using Computer Vision and AI- Mr. Sandeep Telkar (YOR:2021, Pre-Ph.d. Viva Completed).

5) Development of Computer Vision Application with IoT for Seed Quality Assesment- Mr. Shridhar Chini(YOR:2021, Course-work)

6) Characterization of Wool Fibre Using Image Processing and Softcomputing Techniques- Mrs. Swati Sajjan (YOR:2023, Registered).

7) Design and Development of Deep Learning Methodologies for Malassezia Associated Skin Diseases- Mrs. Shobha Hiremath (YOR:2023, Registered).

8)Identification of Historical Events of Ancient Temples Through Computer Vision Techniques-Mr. Kiran Ankalkoti(YOR:2024, Registered).

9) Identification of nutrient content arecanut using computer vision techniques- Mrs. Pooja Satapute (YOR: 2024, Registered).

Publications:

Journals

1. Basavaraj S. Anami, Jagadeesh Pujari, **Rajesh Yakkundimath** (2011). "Identification and Classification of Normal and Affected agriculture/horticulture produce based on combined color and texture feature extraction". International Journal of Computer Applications in Engineering Sciences,1(3), pp.356-360.

2. Basavaraj S. Anami, Jagadeesh Pujari, **Rajesh Yakkundimath** (2011). "Multi- scale Morphological Image Segmentation based modified Watermarking Techniques". International Journal of Graphics and Image Processing. 1(1),pp.16-23.

3. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi (2014). "Automatic Fungal Disease Detection based on Wavelet Feature Extraction and PCA Analysis in Commercial Crops". International Journal of Image, Graphics and Signal processing. 6 (1), pp.24-31. DOI: 10.5815/ijigsp.2014.01.04

4. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi(2013). "Grading and Classification of Anthracnose Fungal disease in Fruits". International Journal of Advanced Science and Technology. 52 (3), pp.121-132.

5. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi(2013). "Statistical Methods for Quantitatively Detecting Fungal Disease from Fruits Images". International Journal of Intelligent Systems and Applications in Engineering. 1(4), pp. 60-67.

6. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi(2013). "Classification of Fungal Disease Symptoms Affected on Cereals Using Color Texture Features". International Journal of Signal Processing, Image Processing and Pattern Recognition. 6 (6), pp. 321-330. DOI: 10.14257/ijsip.2013.6.6.29

7. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi(2013). "Reduced Color and Texture Features Based Identification and Classification of Affected and Normal Fruits Images". International Journal of Agricultural and Food Science. 3 (3), pp.119-127.

8. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi(2014). "Recognition and Classification of Normal and Affected Agriculture Produce Using Reduced Color and Texture Features". International Journal ofComputer Applications. 93(11), pp.17-24. DOI: 10.5120/16259-5910.

9. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi(2014). "Recognition and Classification of Produce Affected by Identically Looking Powdery Mildew Disease". International Journal of Scientific Engineering in Agriculture-Acta Agriculturae. 17(2), pp.29-34. DOI:10.2478/ata-2014-0007

10. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi(2014). "Detection and Classification of Fungal Disease with Radon Transform and Support Vector Machine Affected on Cereals". International Journal of Computer Vision and Robotics. 4 (4), pp.261-280. DOI: 10.1504/IJCVR.2014.065566

11. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi(2014). "Neuro- kNN Classification System for Detecting Fungal Disease Affected on Vegetables Using Local Binary Patterns". Agricultural Engineering International: CIGR Journal. 16 (4), pp.299-308. Corpus ID: 73648813

12. Jagadeesh D. Pujari, **Rajesh Yakkundimath** and A.S.Byadgi(2015). "Image processing Based Detection of Fungal Diseases in Plants". Elsevier Procedia Computer Science.46, pp.1802-1808. (DOI:https://doi.org/10.1016/j.procs.2015.02.137.

13. Jagadeesh D. Pujari, **Rajesh Yakkundimath**, Shamrao Jahagirdar and A.S.Byadgi(2016). "Quantitative detection of soybean rust using image processing techniques". Journal of Crop Protection. 5(1), pp.75-87. DOI: 10.18869/modares.jcp.5.1.75.

14. Jagadeesh D. Pujari, **Rajesh Yakkundimath** and A.S.Byadgi(2016). "SVM and ANN based classification of plant diseases using feature reduction technique". International Journal of Interactive Multimedia and Artificial Intelligence. 3(7), pp.6-14. DOI: 10.9781/ijimai.2016.371

15. J.D. Pujari, Dashrath.K.Bhadangkar, **Rajesh.Yakkundimath**(2017). "Identification and Recognition of Facial Expressions Using Image Processing Techniques: A Survey". International Journal of Emerging Trends in Engineering Research. 5(5).

16. **Rajesh Yakkundimath**, Girish Saunshi and Vishwanath Kamatar(2018). "Plant Disease Detection using IoT". International Journal of Engineering Science and Computing. 8(9), pp.902-906.

17. Vishwanath Kamatar, **Rajesh Yakkundimath** and Girish Saunshi(2018). "Behavior of SVM based classification for varying sizes of heap-grain images". International Journal of Computer Sciences and Engineering. 6(12), pp.32-42. DOI:10.26438/ijcse/v6i12.3242

18. **Yakkundimath, R.,** Saunshi, G. Automatic methods for classification of visual based viral and bacterial disease symptoms in plants. Int. j. inf. tecnol.(2021).pp.1-13.https://doi.org/10.1007/s41870-021- 00701-2.

19. **Yakkundimath, R.,** Saunshi, G., Anami, B. et al. Classification of Rice Diseases using Convolutional Neural Network Models. J. Inst. Eng. India Ser. B (2022). pp.1-13. https://doi.org/10.1007/s40031-021- 00704-4.

20. **Yakkundimath, R.,** Jadhav, V., Anami B. Automated Classification of Cervical Cells Using Integrated VGG-16 CNN model. International Journal of Medical Engineering and Informatics. https://doi.org/10.1504/IJMEI.2022.10046152.

21. **Yakkundimath, R.,** Jadhav, V., Anami B. Co-occurrence Histogram Based Ensemble of Classifiers for Classification of Cervical Cancer Cells. JournalofElectronic Science and Technology.https://doi.org/10.1016/j.jnlest.2022.100170 .

22. **Yakkundimath, R.,** Saunshi, G. et al. Paddy variety identification from field crop images using deep learning techniques. International Journal of Computer Vision and Robotics. https://doi.org/10.1504/IJCVR.2022.10047193.

23. Telkar, S., **Yakkundimath, R.** Vegetable Quality Detection and Price Prediction Using Image Processing and Machine Learning. https://doi.org/10.37897.GRJ.2021.V8I7.22.50024

24. **Yakkundimath, R.,** Saunshi, G. et al. A comparative analysis of paddy crop biotic stress classification using pre-trained deep neural network. Artificial Intelligence in Agriculture. https://doi.org/10.1016/j.aiia.2022.09.001.

25. Ramesh M Badiger, **Yakkundimath, R,** Deep Learning Approaches for Age-based Gesture Classification in South Indian Sign Language. Engineering, Technology & Applied Science Research. Vol. 14, No. 2, 2024, 13255-13260.

26. **Yakkundimath, R.,** Ramesh M Badiger, Journal of Electrical Systems. Deep Learning Based Classification of Single-Hand South Indian Sign Language Gestures. Vol. 20 No. 1s (2024).

27. Girish Saunshi, **Yakkundimath, R.,** Chini, S., Yerriswamy T. An Efficient Decision Making System for Sustainable Fertilization, Volume 23 Issue 3, pp.1-8(2023).

28. **Jadhav, V.S., Yakkundimath, R., & Konnurmath, G.** Cervical Cancer Severity Characterization Using Machine Learning Techniques. Indian J Gynecol Oncolog, 22, 156.

29. Ramesh M Badiger, **Yakkundimath, R,** Deep Learning Based Classification of Double-Hand South Indian Sign Language Gestures for Deaf and Dumb Community. Eur. Chem 12(6). 3191-3201.

Communicated to Journals

1. **Yakkundimath, R.,** Girish Saunshi. Ensemble of Deep Convolutional Neural Networks for Predicting Blast Disease Severity in Paddy communicated to Pattern Recognition and Image Analysis. Advances in Mathematical Theory and Applications.

2. Yakkundimath, R., Guruprasad Konnurmath. Leveraging GANs for Enhanced Precision Agriculture communicated to Proceedings of the Indian National Science Academy.

3. **Yakkundimath, R.,** Girish Saunshi. Emotion Recognition System for Individuals with Autism Spectrum Disorder using Deep Learning Techniques communicated to S N Computer Science.

Conferences

1. Jagadeesh Pujari, **Rajesh Yakkundimath** and Basavaraj S. Anami(2011). "Color Based Identification and Classification of Normal and AffectedAgriculture/Horticulture Produce". Proc. of International Conference on Communication, Computation, Management and Nanotechnology, 23-25 Sep, Bhalki, India.

2. Jagadeesh D. Pujari, **Rajesh.Yakkundimath** and A.S.Byadgi(2014). "Identification and Classification of Fungal diseases Affected on Agriculture/Horticulture Crops Using Image Processing Techniques". Proc. Of International Conference on Computational Intelligence and Computing Research, IEEE,Coimbatore, India. pp.1-4. (SCOPUS). DOI:10.1109/ICCIC.2014.7238283.

3. Basavaraj S. Anami, **Rajesh Yakkundimath**, Prashant Bhandari(2011). "A Novel Invisible Watermarking Insertion-Extraction using DWT Water marking Technique", Proc. of ICNICT-2011, Ghaziabad, India.pp.461-463. DOI: https://doi.org/10.26483/ijarcs.v2i6.922

4. Guruprasad K and **Rajesh Yakkundimath**(2017). "A combined approach of biometrics and watermarking for digital image's copyright protection". Proc. of 2nd NCCOCE, Bangalore, India.

5. **Rajesh Yakkundimath**, Jagadeesh D. Pujari and Guruprasad K(2017). "Android Based Detection of Plant Diseases Affecting Leaves". National Conference on, NCCCI 2017 Gandhigram, Tamilnadu, India, January 27-28, 2017.

6. J.D. Pujari, Dashrath.K.Bhadangkar, **Rajesh.Yakkundimath**(2020). "Comparison of Tuplet of Techniques for Facial Emotion Detection: 4th IEEE International Conference on I-SMAC, SCADIT, Palladam, India on 07-09, Oct-2020.pp.725-730. (SCOPUS). DOI: 10.1109/I-SMAC49090.2020.9243439.

7. Chini S., **Yakkundimath,R**. et al. Automated Classification of Wheat Varieties Using Soft Computing Techniques. ICCR 2021. Communications in Computer and Information Science, vol 1697. Springer, Cham. https://doi.org/10.1007/978-3-031-22405-8_7

8. Sandeep Telkar, **R. Yakkundimath**, "Detection of Weed plant in Farm and Removing using Unmanned Ground Vehicle," 2023 7th International Conference on I-SMAC (IoT in Social, Mobile, Analytics and

Cloud) (I-SMAC), Kirtipur, Nepal, 2023, pp. 1082-1086, doi: 10.1109/I-SMAC58438.2023.10290653.

9. **Yakkundimath, R.,** Ramesh M Badiger. South Indian Sign languages Recognition and Classification using Deep Learning Networks. IEEE ICRISST 2024 on 15 and 16th March 2024.

10. **Yakkundimath, R.,** et al., Harnessing Data Science for Healthy Herds: Deep Learning for Cattle Disease Detection. 2024 IEEE North Karnataka Subsection Flagship International Conference (NKCon).

Communicated to Conferences

1. **Yakkundimath, R.,** Shridhar Chini Assessment of Yellow Rust Intensity in Wheat Using Machine Vision Technology communicated to Information Technology and Artificial Intelligence (ITAI 2025).

2. **Yakkundimath, R.,** Varsha Jadhav. Machine Learning Algorithms for Cervical Cancer Stage Detection communicated to SMARTCon 25.

Patent

Using Machine Learning to prevent crane operators from incidents with a blind spot camera. ID: 202141005793 A

Professional achievements such as any awards, special skills, etc.

- Received Dr.A.P.J.Abdul Kalam National Award for contributions to teaching, research & publications.
- Received "Best senior faculty award" by Novel Research Academy, Pondicherry.
- Received :"Best paper award" by Journal of Electronic Science and Technology (Elsevier)
- Received 4 lakhs Grants from AICTE .
- Received funds for students projects selected for KSCST.
- Professional memberships of Computer Society of India (CSI), Indian Society for Technical Education Institution of Engineers (IEI).

Training programmes attended

S.N.	Subject Area of Training	Organization	Place	Period / Duration
a)	Image Processing and Machine Learning	SDMCET	Dharwad	17-18 Feb 2017
b)	Design of Algorithms	IIT	Kharagpur	27 April to 30 May 2015
c)	Computer programming	IIT	Mumbai	May 20 to June 21 2014
d)	Outcome based education	KLEIT	Hubballi	24-25 Jan 2014
e)	Linear algebra and its applications	JNNCE	Shimoga	24-28 January 2011
f)	Digital image processing	SDMCET	Dharwad	13th -15th March 2009
g)	ABET	BVBCET	Hubballi	7-8 August 2008
h)	Information Technology	REC	Hulkoti	19 -20 March 2008
i)	Machine Learning	KLEIT	Hubballi	27th to 31st Janaury,2018
j)	Data Analytics	KLEIT	Hubballi	24th to 28th July,2018

k)	Big Data & IoT	SJBIT	Bengaluru	7th[th] to 12th Janaury,2019
l)	STTP on Deep Learning Tools & Techniques	KLESCET	Belgaum	02/11/2020 to 07/11/2020
m)	STTP on Research Trends in Computer Science andEngineering	SDMCET	Dharwad	21/12/2020 to 26/12/2020
n)	Innovation, IPR, Technology Development and Enterpreneurship	St.Claret College	Bengaluru	14/06/21 to 19/06/21
o)	Research Pardigms	St. Francis College	Bengaluru	03/05/21 to 08/05/21
p)	Applications of Artificial Intelligence & Machine Learning	Reva University	Bengaluru	10/05/21 to 14/05/21
q)	Artificial Intelligence and its Applications	JCET	Mysore	24/05/21 to 29/05/21
r)	Examination reforms	AICTE	New Delhi	08/07/21 to 10/07/21
s)	Block Chain and IoT	CIT	Gubbi	30/12/21 to 05/01/22
t)	Machine Learning Applicationson Image Processing	AICTE	New Delhi	17/01/22 to 21/01/22
u)	Data Science with Statistical Methods Using Python	G.H. Raisoni College of Engineering	Nagpur	17/01/22 to 21/01/22
i)	Writing an Effective Research Article: TIPS & TRACKS	KLS VDIT	Haliyal	03/10/2023 to 07/10/2023
j)	STTP on Sales Force	G.H. Raisoni College of Engineering	Nagpur	18/12/2023 to 22/12/2023

Additional responsibilities:
- Worked as member of Board of Examiners
- Worked as NBA, project co-ordinator, lesson plan co-ordinator,Time Table Co-ordinator, Seminar Co-ordinator
- Worked as staff co-ordinator and staff secretary
- Worked as department association co-ordinator
- Worked as co-ordinator of CSI
- Worked as co-ordinator of Microsoft IT Academy
- Worked as ADVITIYA National Fest Co-ordinator
- Actively involved in projects in the area of Image Processing, Machine Learningetc.
- Actively involved in National, International, Workshops, FDP programs,Technical Fest conducted at department and college level.
- Reviewer of various National/International/Conference Journals.
- Chaired session at various National/International/Conferences.
- Doctoral committee member for research scholars, registered under VTU,Belagavi.
- Guided more than 25 UG projects and 5 PG projects
- Awarded 2 and Guiding 5 Ph.D. research scholars, registered under VTU,Belagavi.
- Recourse person to various Institutes.
- PHD Thesis Examiner

Subjects Taught:

Computer Organization, Advanced Computer Architecture, Digital Image Processing, Pattern Recognition, Discrete Mathematical Structures, Operating Systems, System Software, Storage Area Networks, Big Data Analysis, Internet of Things, Multi-core Architecture & Programming, Computer Concepts & C Programming, Programming in C & Data Structures, C Programming for problem solving, Computer Graphics & Visualization, Network Management, Artificial Intelligence & Machine Learning, Big Data & Analytics, Universal Human Values, Pattern Classification, Digital Image Processing, Data Science & Visualization.

General information

1. Name — Rajesh Yakkundimath
2. Gender — Male
3. Nationality — Indian
4. Category — General
5. Date of birth — 01/05/1982
6. Institute address — K.L.E.Institute of Technology, Department of Computer Science & Engineering, KLET, Gokul, Hubballi-30
7. Phone / mobile number — 9481126276(M)
8. Email — rajeshymath@gmail.com, rajesh.y@kleit.ac.in

04/12/2024   Dr.Rajesh Yakkundimath

Date   Full name   Signature