




# DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT

(Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi)

Opp. Art of Living, Udayapura, Kanakapura Road, Bangalore- 560082

## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Accredited by NAAC with A+ GRADE, New Delhi

<b>Faculty Name</b>	<b>Dr. SANDHYA N</b>	
<b>Academic Designation</b>	<b>Professor &amp; HoD</b>	
<b>Educational Qualification</b>	<b>BE, M. Tech, Ph.D</b>	
<b>Experience in Years</b>	<b>0.5(Industry) + 16(Teaching)</b>	
<b>Area of Interest</b>	<b>Image Processing, Machine Learning, Big Data.</b>	
<b>Date of Birth</b>	<b>19-09-1982</b>	
<b>Email ID</b>	<b>hodaiml@dsatm.edu.in dr.sandhya1909@gmail.com</b>	

### Educational Details

- Ph.D - in Image processing field from VTU 2017
- M.Tech- in **Computer Science & Engineering** from DSCE, B'LORE, **VTU 2007**
- B.E- in Computer Science & Engineering from East point College of Engg., Bangalore, VTU, 2004

### Personal Details

- Date of Birth: 19-09-1982
- Hobbies: Listening to music
- Languages Known : Kannada, English, Hindi

### Professional Experience

- Worked as Associate professor in Department of CSE, Dayananda Sagar College of Engineering from October 2004 to Jan 2018.
- Worked as **Professor and Head, Dept. of CSE, City Engineering College, Bangalore** from February 2018 to August 2019.
- Worked as Associate Professor in Department of CSE, Dayananda Sagar Academy of Technology & Management from August 2019 to February 2021.
- Currently working as **Professor and Head, Dept. of AIML.**

### Publications

#### International Journals:

1. Sandhya.N, Krishnan.R, D.R.Ramesh Babu, "A Language Independent Characterization of Document Image Noises in Historical Scripts", International Journal of Computer Applications, Volume 50-No9, 2012.
2. Sandhya.N, Krishnan.R, D.R.Ramesh Babu, "Feature Based Kannada Character Classification Method of Kannada Character Recognition", International Journal of Science and Engineering Research, Volume 5, Issue 2, February 2014.
3. Sandhya.N, Madhusudan.N, Krishnan.R, D.R.Ramesh Babu, "Handwritten Kannada Character Recognition using Zonal Features and Multi-class SVM", ICPRMSP'15, International Journal of Applied Engineering Research (IJAER), Volume 9, Number 20 (2014) Special Issues.

4. Sandhya N, Rahul Bant, Krishnan.R, D.R.Ramesh Babu, “HMM based – Character Recognition for online Handwritten Indic Scripts”, International Journal of Engineering Research and Technology, Volume. 4, Issue. 06, June 2015.
5. Sangeetha Kancharla, Sandhya.N, D.R. Ramesh Babu, “Slack Stealing query scheduling to meet deadlines of real time applications in WSN’s” ,IJEEE, Volume 2, Issue 4, April 2015.
6. Chandana P, Sharada Preeti, H. Amrutha , Ramesh M , Sandhya.N, “SVM Based Classification Approach For Identifying Bacterial And Fungal Diseases In Plant Leaves”, International Journal of Latest Technology in Engineering, Management & Applied Science, Volume VII Issue VI June 2018.
7. Sandhya N, Krishnan R, Ramesh Babu D R, Bhaskara Rao N, “An Efficient Approach for Handling Degradation in Character Recognition”, International Journal for Advanced Intelligence Paradigms, Vol. 14, issue 1-2, 2019, Elsevier (Scopus). DOI:10.1504/IJAIP.2019.102960.
8. Sandhya N, Krishnan R, D R Ramesh Babu, “A Framework for Degraded Kannada Character Recognition”, ICIPCN 2020, Advances in Intelligent Systems and Computing **book series, volume 1200, Chapter 67, Springer Nature.**
9. Sandhya N, Anirudh Marathe, JS Dawood Ahmed, Aman Kumar, Harshith R, “Convolutional Neural Network Based Approach to Detect Pedestrians in Real-Time videos”, IJEEE, VOL-10, Issue-1, OCT 2020.
10. Aditya Singh, Bhavya Pandey, Devashish Dana, Harsh Vikram Singh, Sandhya.N, “Implementing Real Time Vehicle Speed Estimation Techniques”, IJARIE-ISSN(O)-2395-4396, Vol-7 Issue-4 2021

**Dr. Sandhya N Google Scholar:** Citations: 35, H-index: 3.

**International Conferences:**

11. Sandhya.N, Krishnan.R, D.R.Ramesh Babu, Pianka Das, “A Comprehensive pre-processing approach for digital preservation of documents”, Elsevier Proceedings of International Conference on Emerging Research in Computing, Information, Communication and Applications-(ERCICA-14), volume 3, page10.
12. Sandhya N, Krishnan.R, D.R.Ramesh Babu, “A Novel Local Enhancement technique for rebuilding Broken Characters in a Degraded Kannada Script”, IEEE International Advance Computing Conference 2015.
13. Sandhya N, Krishnan R, “Broken Kannada Character Recognition- a Neural Network based approach”, IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) March 2016.
14. Altaf Patel, Aparna.V.P, Apoorva.C.G, Piyush Kataria, Sandhya N. “An Efficient way of Filtering sensitive messages Using N-gram technique over Social Media”, International conference on Multimedia Processing, Communication and Information Technology, MPCIT, 8<sup>th</sup> and 9<sup>th</sup>, June, 2018. JNNCE, Shivamoga, Karnataka, India. DOI:16.10089.IJSRR.2018.V7I06.5245.2393
15. K A Aditya Srinivas, Dhanush K, Chanchal Soni, Sandhya.N, “A Survey on Fabric Defect Detection and Related Techniques”, 2<sup>nd</sup> International Conference on Futuristic Trends in Embedded Systems and Networking ICFTEN-2021, 7<sup>th</sup> and 8<sup>th</sup> July.
16. Aditya Singh, Bhavya Pandey, Devashish Dana, Harsh Vikram Singh, Sandhya.N, ” Real Time Vehicle Speed Estimation Techniques – A survey”, ICGP-2021.
17. Aditya Singh, Bhavya Pandey, Devashish Dana, Harsh Vikram Singh, Sandhya N, “Real Time Vehicle Speed Estimation Techniques – A survey”, International Conference on “Global Convergence in Technology, Entrepreneurship, Computing and Value Engineering: Principles and Practices “(ICGCP—2021).

**National Conferences:**

1. Deepthi P Hudedagaddi, Deepa S, Nayana S, Sandhya.N, “Network security Using Neural Cryptography”, 24<sup>th</sup> CSI students convention, 2010 [Best Paper prize].
2. Amitash Ramesh, Soumya Ramesh, Varsha Bhat K, Sandhya.N, “Network Communication using the Point-to-Point protocol”, 24<sup>th</sup> CSI students convention, 2010.
3. SaiMahita, Anushree G, Akshaya R, Madhura Pujary, Sandhya N, “Breast Cancer detection using AI Techniques”, Proceedings of 33<sup>rd</sup> CSI Karnataka Student Convention, 28<sup>th</sup> and 29<sup>th</sup> Feb 2020.
4. Anirudh Marathe, JS Dawood Ahmed, Harshith R, Aman Kuar, Sandhya N, “Real-Time Pedestrian detection using Machine Learning Techniques”, Proceedings of 33<sup>rd</sup> CSI Karnataka Student Convention, 28<sup>th</sup> and 29<sup>th</sup> Feb 2020.
5. Likitha V, Aishwarya R, Akshya Ganji, Sandhya N, Shylaja B, “Smart Parking Slot Management System”, Proceedings of 33<sup>rd</sup> CSI Karnataka Student Convention, 28<sup>th</sup> and 29<sup>th</sup> Feb 2020.
6. Nagabhishek H, Priya S, Sheeba Azmi, Vinay M S, Sandhya N, “Search for Exoplanets”, Poster presentation, 33<sup>rd</sup> CSI Karnataka Student Convention, 28<sup>th</sup> and 29<sup>th</sup> Feb 2020.

### **Conference Attended**

- Attended and Presented on “A Novel Local Enhancement technique for rebuilding Broken Characters in a Degraded Kannada Script”, at BMS college of Engineering, IACC- 2015
- Attended and Presented on “A Comprehensive pre-processing approach for digital preservation of documents”, at Nitte Meenakshi Institute of Technology, ERCICA-2014
- Attended and Presented on “Broken Kannada Character Recognition- a Neural Network based approach”, at DMI College of Engineering, Chennai, India, IEEE ICEEOT-2016.
- Attended and Presented on “A Framework for Degraded Kannada Character Recognition”, at Vivekanandha College of Technology for Women, Chennai, ISMAC-CVB 2019.
- Attended as Session Chair of IEEE International Conference on “ Disruptive Technologies for interdisciplinary research and Applications” , DSI, Bangalore, CENTCON 19-21 Nov 2021,

### **Seminar Attended**

- Participated in webinar on “A new era of Data Science” organized by Raja Rajeshwari College of Engineering, 26<sup>th</sup> May 2020.
- Participated in NAAC sensitization program organized by IQAC, DSATM, 19<sup>th</sup> August 2021.
- Participated in webinar on “Women rights” organized by NSS unit DSATM, 3<sup>rd</sup> July 2020.
- Participated in e-quiz on NAAC organized by IQAC DSATM, 31<sup>st</sup> July 2020.
- Participated in webinar on “A new era of Data Science” organized by Raja Rajeshwari College of Engineering, 26<sup>th</sup> May 2020.
- Participated in webinar on “Convolution Neural Networks Introduction, Implementation and Application” organized by SJCIT, 23<sup>rd</sup> May 2020.
- Participated in webinar on “Enhance NAAC Grading / NIRF Ranking by International Educational Standard –ISO 21001:2018” organized by PS Quality Certifications, 9<sup>th</sup> Sept 2020.
- Participated in Seminar on “Cultivating Character” organized by Character Solutions International, 7<sup>th</sup> August 2010.

## Workshop Attended

- Attended Training Program on Data Analytics with Python and AI delivered by Electro Cloud labs from 29<sup>th</sup> – 31<sup>st</sup> March 2021.
- Participated in webinar on “Use of Mobile Applications for Digital Payment and E-Governance Services” organized by IETE, 26<sup>th</sup> DEC 2020.
- Organized and attended workshop on DBMS project using PhP and Java from Nov 20<sup>th</sup> to 22<sup>nd</sup> 2020.
- Organized 5-Day Faculty Development (Webinar) program on “Research Focus in Computer Science” held at DSATM on 8<sup>th</sup> June to 12<sup>th</sup> June 2020.
- Attended workshop on Intellectual Property Rights organized by MBWARE labs on 23<sup>rd</sup> Nov 2019.
- Coordinated workshop on “Artificial Intelligence and Machine Learning “conducted by GEEKS Technologies Pvt. Ltd. New Delhi in association with IIT-Delhi from 23<sup>rd</sup> to 27<sup>th</sup> Sept 2019
- Participated in 3 day workshop on Research Methodology and Latex organized by VTU e-learning Centre, Mysuru from 20<sup>th</sup> – 22<sup>nd</sup> December 2016.
- Participated in workshop on Digital Image Processing Using Matlab organized by DSCE, from 19<sup>th</sup> – 23<sup>rd</sup> September 2016.
- Attended workshop on “High Impact Teaching Skills” conducted by DSCE, on 29<sup>th</sup> and 30<sup>th</sup> July 2011.
- Participated in AICTE sponsored “National workshop on Image Processing & Computer Vision” organized by DSCE, from 2<sup>nd</sup> – 4<sup>th</sup> June 2010.
- Participated in Conference workshop ICSE -2010 organized by DSCE, on 24<sup>th</sup> April 2010.
- Participated in Mission 10x workshop organized by Wipro, 25<sup>th</sup> – 29<sup>th</sup> April 2011.
- Participated in National workshop on Image Processing & Computer Vision organized by DSCE, from 16<sup>th</sup> – 17<sup>th</sup> October 2008.
- Participated in workshop on Research Methodologies organized by PESIT, from 24<sup>th</sup> – 25<sup>th</sup> January 2008.

## Patents published with All Details

- Patent filed in the field of IOT dated 26/02/2020 “High Speed and secure back propagation learning using upright partitioned data with IOT”. Application no. 202141010390
- Patent filed in the field of Character Recognition dated 12/03/2021 “System and method for handling degradation in character recognition”. Application no. 202041008031

## Consultancy Amount Fetched with Details

- Received Product Consultancy from GEEKS Technologies Private Ltd. in collaboration with IIT Delhi.
- Received Product Consultancy from NCDRC in collaboration with MHRD.
- Received Product Consultancy from Electro cloud labs, Hyderabad in collaboration with Centre of Excellence for Cloud based Data Science labs, DSATM.

## Awards and Recognition

- Best Professional Performer, Dept. of Artificial Intelligence & Machine Learning, DSATM, 2021.
- Best Professor in Computer Science & Engineering Studies, Dewaang Mehta National Education Leadership Awards 2019.
- Best paper award for “Network security Using Neural Cryptography”, 24<sup>th</sup> CSI convention, 2010 [Best Paper].

- Chief guest-Keynote speaker for “Inter collegiate tech fest techno binge 2K21” on 25<sup>th</sup> of June 2021, at Maharani Lakshmi Ammanni College.
- National Advisory committee member of 2<sup>nd</sup> International Conference on Futuristic Trends in Embedded Systems and Networking (ICFTEN-2021).
- Guest Lecture on AI & ML Applications in various fields at DSBA, Bangalore on 26<sup>th</sup> of October 2021.

### **Academic Activity**

- Heading Department of Artificial Intelligence and Machine Learning
- Guiding two VTU research scholars.
- Faculty In charge for Centre of Excellence for cloud based Data Science using Machine Learning Lab, DSATM.
- Coordinator for NCDRC Labs: internships, consultancy, projects, certification programs.
- NAAC IQAC member at Dayananda Sagar Academy of Technology and Management
- AICTE NISP Institutional main coordinator, DSATM
- Reviewer Easy chair conferences and journals
- Editorial Member of SCIREA Journal of Information Science and Systems Science.
- Co-ordinated for National level workshop on AI and ML DSATM.
- Educator for Uipath Robotic Process Automation certification at DSATM.

### **Faculty Development Activity/Workshops**

- Organized Hands-on workshop on Internet of Things and its Application, for 3<sup>rd</sup> sem AIML students, DSATM from 3<sup>rd</sup>-4<sup>th</sup> Dec 2021
- Completed Coursera course on Python Basics delivered by University of Michigan - 2021
- Attended AICTE FDP on “IOT Framework Development for Agriculture Sector” from 6/9/2021 to 10/9/2021.
- Attended AICTE FDP on “Artificial Intelligence in Energy Sector: Opportunities and Challenges” from 9/8/2021 to 13/8/2021.
- Attended three day National Level FDP on “Mobile Application Development” from 22<sup>nd</sup> Mar to 24<sup>th</sup> Mar 2021
- Attended Twelve day FDP sponsored by DST – New Delhi on “Entrepreneurship and Innovation” from 22<sup>nd</sup> Feb to 06<sup>th</sup> Mar 2021
- Attended Five day National Level FDP on “Machine Learning and Deep Learning with H2O.ai” from 28<sup>th</sup> Jan to 1<sup>st</sup> Feb 2020.
- Attended National Level Online Faculty Development Programme on Python Programming organized by Govt. college for women, Kolar held from 5<sup>th</sup> -11<sup>th</sup> June 2020
- Attended ISTE state level Faculty Convention on 9<sup>th</sup> DEC 2017.
- Attended FDP on “Big Data and IOT” conducted by DSCE from 29<sup>th</sup> to 31<sup>st</sup> Jan 2015.
- Attended Microsoft Research India organized “Techvista10” on 11<sup>th</sup> June 2015.

### **Contact Details**

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