

BIODATA

Dr. BASAVANNA M

M.Sc.,M.Phil.,P.hD

Professor

DOS in Computer Science

Davangere University

Davangere-577 007



Areas of Specialization : Digital Image Processing, Pattern Recognition
Scene text analysis and AI.

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Vision

To obtain a challenging position incorporating my knowledge and skills in the field of Computer Science and problem solving experience. Involving in Research activities.

Professional Experience

A senior academican having **25 years** of teaching experience in Computer Science related areas.

Educational Qualifications

Sl. No.	Degree	Specialization/ Subjects	University	Year of Award/ Passing
1	P.HD	Computer Science	VELS University, Chennai, TN	2013
2	M.Phil	Computer Science	Alagappa University, Karaikudi, TN	2007
3	M.Sc	Computer Science	Mysore University	1999
4	B.Sc	Computer Science	Mysore University	1996

Professional Details (Academic/Research Experience)

Sl. No.	Designation	Institution/University	UG/PG	From	To
1	Professor & Chairman Master of Computer Applications (MCA)	Department of Studies in Computer Applications, Davangere University, Shivangotri, Davangere	PG	2023	Till date
2	Associate Professor & Chairman Master of Computer Applications	Department of Studies and Research in Computer Science, Davangere University, Shivangotri, Davangere	PG	2019	2023
3	Assistant Professor and Coordinator PG Dept.	Government of Karnataka, Department of Collegiate Education, Government College (Autonomous), Mandya.	UG and PG	2009	2019
4	Faculty	Yuvaraja's College University, of Mysore, Mysore	UG	2003	2009
5	Lecturer	Sarada Vilas First Grade College, Mysore.	UG	2001	2002
6	Lecturer	Vidyavardhake First Grade College, Mysore.	UG	1999	2001

Areas of Research Interest:

1.	Digital Image Processing
2.	Pattern Recognition
3.	Scene text analysis, Video processing, AI, Computer Networking

Academic/Administrative responsibilities:

1.	AC Member at Government College (Autonomous), Mandya from 2013- 2019
2.	BOS Member at Government College (Autonomous), Mandya from 2013- 2019, Yuvaraja's College (Autonomous), Mysore, St' Philomenous College (Autonomous), Mysore
3.	BOE Chairman and member Government College (Autonomous), Mandya, KSOU, Mysore, JSS College (Autonomous), Ooty Rd, Mysore, Yuvaraja's College (Autonomous), Mysore, St' Philomenous College (Autonomous), Mysore

4.	Reviewer/Editor for different Journal from 2013
5.	Worked as Head of the department and Coordinator PG Department of Computer Science at Government College (Autonomous), Mandya from 2013 to 2019
6.	UGC sponsored Carrier Oriented Programming (COP), Certified Course coordinator from 2013- 2015.
7.	Controller of Examinations (Government College (Autonomous), Mandya from 2013-2016.
8.	Chairman, Department of Studies in Computer Science, Davangere University, Davangere From Dec 2019 to Jan 2022.
9.	Chairman, ICT, Davangere University, Davangere-2020-22
10.	BOS, BOE Chairman (UG, and PG) from the Academic Year 2020-2023
11.	BOS, BOE Chairman from the Academic Year 2023-2026
12.	Chairman, Department of Studies in Computer Applications(MCA), Davangere University, Davangere, From Oct 2023 to till date.

Awards:

1.	Best Research Publication Award-2020 at Teachers Day Celebration-2020, Organized by IQAC, Davangere University, Davangere.
2.	Best Research Publication Award-2021 at Teachers Day Celebration-2021, Organized by IQAC, Davangere University, Davangere

UGC Research Projects:

Sl. No.	Title of the Project	Funding Agency	Project Budget	Period	Status
1.	"Scene Text Detection: Application to Blind Person"	UGC	1,30,000/-	2010-2013	Completed
2.	"Tumor Cell Identification in Medical Images"	UGC	3,50,000/-	2014-2017	Completed

Patents:

Sl. No.	Title of the Patents	Patent number	IPR	Year	Status
1.	"A Novel Deep Convolution Neural Network for Tattoo Text Detection in Images"	2021104831	Australian Govt., Intellectual Property Australia	2022	Granted

2.	"A Novel Method for Writer Age Estimation Using Handwritten Analysis"	2021104210	Australian Govt., Intellectual Property Australia	2021	Applied
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Book Published / Book Chapters Published:

1.	Publisher: IK International Publishing House Pvt. Ltd., New Delhi, Website: www.ikbooks.com Title : "System Analysis and Design: Technology and Applications" ISBN No : 9789385909078 Year: 2016 Pages: 296
2.	Publisher : Shorff Publishers and Distributers Pvt. Ltd., Navi Mumbai www.shorffpublishers.com Title : "Web Programming for Beginners" ISBN No : 9789352133635 Year: 2016 Pages: 299
3.	Publisher : LAP LAMBERT, Academic Publishing, International Book Market Service Ltd. OmniScriptum Publishing Group, 17, Meldrum Street, Beau Bassin 71504, Mauritius. Title : "Scene Text Detection and Recognition: An Image Processing Approach" ISBN No : 978-613-9-96378-2 Year: 2018 Pages: 151
4.	Publisher : LAP LAMBERT, Academic Publishing, International Book Market Service Ltd. Title : "The World of Bigdata" ISBN No: 9786203863710 Year: 2021 Pages: 170, Edition: 1.
5.	Publisher : Walnut Publication. Title :“ Tumor Cell Identification in CT Images using Image Processing Approach” ISBN-10 : 9355742126 ISBN-13 : 978-9355742124 Year: 2022 Pages: 81
6.	Publisher : Walnut Publication. Title : "Concepts and Algorithms of Advanced Data Structures" ISBN-10 : 9355743742 ISBN-13 : 9789355743749 Pages: 331 Year: 2022, Edition: 1

Subject Thought

2019-2020- Operating Systems Concepts, Project/dissertation for Final Year M.Sc Students(3), OS Lab, Digital Image Processing Lab

2020-2021- OOAD, Advanced Data Structures, Programming in C, DS lab

2021-2022- Operating Systems, Project/dissertation for Final Year M.Sc Students (3), OS Lab and Digital Image Processing Lab.

2022-2023- Advanced Data Structures, Programming in C, DS lab, Project/dissertation for Final Year M.Sc Students(4).

2023-2024- Advanced Data Structures, Programming in C, DS lab

Memorandum of Understanding (MOU) and Memorandum of Agreement (MoA)

MOU and MOA between Dept. of Computer Science, University of Malaya. Malaysia and Dept. of Computer Science, Davangere University, Davangere

Under MOU We have Published 04 research papers in different journals, 01 Patent Published, 01 Patent Submitted and conducted Seminars and webinars to our university faculty members and mentoring the PhD students.

As Research Guide:

- a. After my appointment as Associate Professor in Computer Science I have been recognised as Research Guide during 2020. Due to Covid-19, allocation of Research students was delayed. At present, there are 05 (Five) Research Scholars are pursuing Research under my Guidance.

(Ph.D) Scholars Details

Sl.No.	Name of the Scholar	Title of the Research	Date of Registration
01	Mahaveer	New Methods for Recognition of Palm Leaf Manuscripts Text	04.01.2022
02	Maheshwari S Hiremath	New Methods for Extracting Text Watermark from Document Images	
03	Prajwal Kumar P	Malicious Text Identification in Handwritten Descriptive Answer Script	01.04.2023
04	Harish B G	Developing an Efficient Model for Analysing Wound Healing Images using Machine Learning Approaches	
05	Chandraiah T	Sentiment Analysis Using Handwritten Text Images	

- b. It is submitted that as a co-guide, I have guided for Research Scholars in the Department of Food Technology and Biotechnology. The University has awarded Ph.D., Degree for the Said Statement.

Sl. No	Name of the Students	Title of the Thesis	Publication details
1.	Mrs Vyshali V M	Phytochemical Screening Evaluation for Nutraceuticals and Therapeutic Potential of Caralluma Fimbriate through Infusions	02 Publications (Biological Forum – An International Journal and IJPRAI-World Scientific Publishing Co Pvt Ltd)
2.	Mrs Prajwala M	Studies on Management of Bacterial Blight Disease of Pomegranate (Punica Grantum L) in Central Karnataka region	02 Publications (MAK HILL Publications and CAAI Transactions on Intelligence Technology)

Research Publications:

Journal Publications

1. **M. Basavanna**, P. Shivakumara, S. K. Srivatsa and G. Hemantha Kumar, “Angle-Proximity based Text Block Verification Method for Text Detection in Scene Images”, International Journal of Machine Intelligence (IJMI), 2011, pp 245-250.
2. **M. Basavanna**, G. Shivanand, P. Shivakumara and S. K. Srivatsa, “Automatic non-horizontal scene text recognition from document image”, International Journal of Machine Intelligence (IJMI), 2011, pp 164-167.
3. **M. Basavanna**, P. Shivakumara, S. K. Srivatsa and G. Hemantha Kumar, “Multi-oriented Text Detection in Scene Images”. International Journal of Pattern Recognition and Artificial Intelligence (IJPRAI), World Scientific, 2012, pp.1255010-1-19.
4. Anil Kumar R J, Lalitarangarajan, Shivanand Gornale, **Basavanna M**, “Image Detection in digital documents by using Digital Image Processing Approach”, JSSCM Journal, JSSCACS, Vol 3, Issue 1, May-2014 Mysore. pp-16-23.
5. A. C. Nuthan, M. S. Naveen Kumar, Shivanand S. Gornale, **M. Basavanna**, “Development of Randomized Hybrid Cryptosystem Using Public and Private Keys”, Emerging Research in Electronics, Computer Science and Technology , Lecture Notes in Electrical Engineering Volume 248, 2014, pp 919-926 .

6. **Basavanna M**, S. S. Gornale, "Skew Detection and Skew Correction in scanned Document Image using Principal Component Analysis ", International Journal of Scientific & Engineering Research(IJSER), Volume 6, Issue 1, January-2015, ISSN 2229-5518, PP 1414-1417.
7. S. S. Gornale, **Basavanna M**, and Kruthi R, "Fingerprint Based Gender Classification Using Minutiae Extraction", International Journal of Advanced Research in Computer Science(IJARCS), Volume 6, No. 1, Jan-Feb 2015, ISSN No. 0976-5697, PP 72-77.
8. S. S. Gornale, **Basavanna M** and Kruthi R, "Gender Classification Using Fingerprints Based On Support Vector Machines (SVM) With 10-Cross Validation Technique", International Journal of Scientific & Engineering Research, Volume 6, Issue 7, July-2015, ISSN 2229-5518, pp-588-593.
9. **Basavanna M**, and S. S. Gornale, "Identification and Classification of Flowers Images using Colour models", International Journal of Advanced Research in Computer Science and Software Engineering, Volume 5, Issue 6, June 2015 ISSN: 2277-128X, pp-1003,1007.
10. **M. Basavanna**, P. Shivakumara, S. K. Srivatsa and G. Hemantha Kumar, "Adaptive Histogram Analysis for Scene Text Binarization and Recognition", Malaysian Journal of Computer Science (MJCS), Vol. 29(2), 2016, PP-74-85.
11. T. N. Govindiah, B.N. Ramakrishna, and **Basavanna M**, "Studies on Molecular Interactions of Liquid Crystalline Materials using Thermodynamic and Ultrasonic Technique", International Journal of Advanced Research (IJAR), Vol. 4(11), 2016,pp-425-431.
12. **Basavanna M**, Shivanand S. Gornale, T. N. Govindaiah, "Tumor Cell Identification in Medical Images Using Image Processing Techniques", GLOBAL JOURNAL OF ADVANCED ENGINEERING TECHNOLOGIES AND SCIENCES (GJAETS), 3(10), October, 2016, pp-13-17.
13. S. S. Gornale, **Basavanna M**, and Kruthi R, "Fingerprint Based Gender Classification Using local binary pattern", International Journal of Computational Intelligence Research (IJCIR), Volume 13, No 2, 2016, pp-261-271.
14. T. N. Govindiah, M.T. Shivasagar, B.N. Ramakrishna, and **Basavanna M**, "Optical and Electrical Conductivity measurement of Reentrant Smectic Phases of in ternary mixture of Liquid crystalline materials", International Journal of Current Advanced Research, ISSN:O:2319-6475, Volume 6; Issue 3, March 2017,pp-2559-2563.
15. **Basavanna M**, Prem Singh M and Chandraiah T, "Detection of the Tumor cell in CT Images", International Journal of Emerging Trends & Technology in Computer Science (IJETTCS), Volume 6, Issue 4, July-August 2017, pp-28-32.
16. Zhen Wang, Palaiahnakote Shivakumara, Tong Lu*, **Mahadevappa Basavanna**, Umapada

- Pal, Michael Blumenstein. "Fourier-residual for printer identification". *The 14th International Conference on Document Analysis and Recognition (ICDAR-2017)*, IEEE, Kyoto, Japan, Nov 9-15, 2017, pp-1114-1119.
17. **Basavanna M**, Prem Singh M, Chandraiah T, Prakash raje urs M, "Signature Verification Using PCA and Geometric Functions", *International Journal of Latest Trends in Engineering and Technology (IJLTET-Jan-2018)*, Vol.(9) Issue (3), pp-057-062.
18. S. S. Gornale, **Basavanna M**, and Kruthi R, "Comparative Analysis of Classifiers for Gender Identification Using Fingerprints", *International Journal of innovative Research in Science, Engineering and Technology(IJIRSET)*, Vol. 7, Issue 6, June 2018, pp-6937-6944.
19. **Basavanna M**, Prem Singh M, Prakash Raje Urs M, Chandraiah T, "Recognition of Geometrical Shapes Using Inclination and Statistical Features", *International Journal of New Innovations in Engineering and Technology*, Volume 12, Issue 4, January-2020, ISSN: 2319-6319, Page No. 021-026. Impact factor - 4.012
20. **Basavanna M**, Prem Singh M, Balakrishna M, "Augmented Shopping Application based on the User Location", *International Journal of New Innovations in Engineering and Technology*, Volume 15 Issue 2, ISSN: 2319-6319, November 2020, Page No. 16-22.
21. S. B. Mallikarjuna, Palaiahnakote Shivakumara, Vijeta Khare, N. VinayKumar, **M.Basavana**, Umapada Pal and B.Poornima, "CNN Based Method for Multi-Type Diseased Arecanut Image Classification ", *Malaysian Journal of Computer Science (MJCS)*, Vol. 34(3),2021,ISSN: 0127-9084, pp 255-265.
22. S. B. Mallikarjuna, Palaiahnakote Shivakumara, Vijeta Khare, **M. Basavanna**, Umapada Pal and B. Poornima, "Multi-Gradient-Direction based Deep Learning Model for Arecanut Disease Identification", *CAAI Transactions on Intelligence Technology*, Volume7, Issue2, June 2022, pp-156-166.
23. Maheshwari S. Hiremath, **Basavanna M** and Prem Singh M, "A Survey on Extraction of Watermark Information from Images and Documents", *Industrial Engineering Journal* ISSN: 0970-2555, Volume 15 Issue 11, October 2022, pp-342 -350.
24. Vyshali V.M., Ravikumar Patil H.S., **Basavanna M.**, Shivakumara P., Sumalatha K.R., Sushmitha S.5 and Maruthi K.R., A Comparative Study on Wet and Dry extracts of *Caralluma fimbriata* for Phytochemicals and Evaluation of Therapeutic activity, *Biological Forum – An International Journal* 15(8a): 000-000(2023), ISSN No. (Print): 0975-1130 ISSN No. (Online): 2249-3239, (2023)

25. Palaiahnakote, Shivakumara and Kumar, C. Pavan and Aggarwal, Pranjal and Sharma, Shubham and Chandana, Pasupuleti and **Basavanna, M** and Pal, Umapada, Tldsmi: Genetic Algorithm Based Network for Text Localization in Distorted Social Media Images. Available at SSRN: <https://ssrn.com/abstract=4348525> or <http://dx.doi.org/10.2139/ssrn.4348525>, (2023).
26. Maheshwari S. Hiremath and **Basavanna M**, Max-Min Approach for Watermark Text Extraction in Documents, Journal of Harbin Engineering University, Vol 44 No. 11, ISSN: 1006-7043, November 2023, pp-1171-1178.
27. M. Prajwala, S.M. Gopinath and **M. Basavanna**, 2024. "Harnessing Microbial Consortium for Effective Control of Xanthomonas axonopodis pv. punicae-Induced Bacterial Blight of Pomegranate," Res. J. Med. Sci., 18: 60-72, doi: 10.59218/makrjms. 2024.4.60.72 Res. J. Med. Sci., 18: 60-72, doi: 10.59218/makrjms. 2024.4.60.72 MAK HILL Publications .
28. Prajwala M, Prajwal Kumar.P, Palaiahnakote Shivakumara, Basavanna M, S M Gopinath and Daniel Lopresti, "Domain Independent Adaptive Histogram Based Features for Pomegranate Fruit and Leaf Diseases Classification" CAAI Transactions on Intelligence Technology. **(No. CIT-2023-11-0671.R1—Accepted for publication)**.
29. Prajwal Kumar.P, Palaiahnakote Shivakumara, **Basavanna M**, Ravikumar Patil H. S and Vyshali V. M, A New Approach for Classification of Spices to Make Special Herbal Tea using Caralluma Fimbriata, International Journal of Pattern Recognition and Artificial Intelligence, (IJPRAI), World Scientific Publishing Co Pvt Ltd , **(Ref.: Ms. No. IJPRAI-D-24-00081- Accepted for publication)**.

Conference Publications

1. **M. Basavanna**, P. Shivakumara, S. K. Srivatsa, and G. Hemantha Kumar, "A New Run-length based Method for Scene Text Detection", In Proc. IICAI, 2011, pp 1730-1736.
2. Sachith B K, Shivakumara P, **Basavanna M**, Roopa C K, "Sharpness based Method for Lung Cancer Cell Identification", Eighth International Conference on Image and Signal Processing (ICISP-2014), The Society of Information Processing, (SIP), Bangalore, pp 7-12.
3. Lakshmikanth V and , **Basavanna M**, "A study on business related data analysis using data mining approach", One day National level Multidisciplinary conference- Emerging Trends in Digital Transformation, ETDT-2018, 30th July 2018, Government College for Women, Maddur, ISBN : 978-81-933447-3-6, pp-21-27.
4. Chandrakant Naikodi, **Dr. Basavanna M**, Anusurya, Shobha RT, Lakshmidhevi CR, Devaraj HS, "A Research on Possible Misuse of Digitally Converted Handwritten Text and Recognition System", Easton 100, 5th International Conference on Computing Sciences, PROCEEDINGS -

Papers Presented

1. **M. Basavanna**, P. Shivakumara, S. K. Srivatsa and G. Hemantha Kumar, "Angle-Proximity based Text Block Verification Method for Text Detection in Scene Images", International Journal of Machine Intelligence (IJMI), 2011, pp 245-250.
2. **M. Basavanna**, G. Shivanand, P. Shivakumara and S. K. Srivatsa, "Automatic non-horizontal scene text recognition from document image", International Journal of Machine Intelligence (IJMI), 2011, pp 164-167.
3. **M. Basavanna**, P. Shivakumara, S. K. Srivatsa, and G. Hemantha Kumar, "A New Run-length based Method for Scene Text Detection", In Proc. IICAI, 2011, pp 1730-1736.
4. Sachith B K, Shivakumara P, **Basavanna M**, Roopa C K, "Sharpness based Method for Lung Cancer Cell Identification", Eighth International Conference on Image and Signal Processing (ICISP-2014), The Society of Information Processing, (SIP), Bangalore, pp 7-12.
5. Lakshmikanth V and , **Basavanna M**, "A study on business related data analysis using data mining approach", One day National level Multidisciplinary conference- Emerging Trends in Digital Transformation, ETDT-2018, 30th July 2018, Government College for Women, Maddur, ISBN : 98-81-933447-3-6, pp-21-27.

Conference/ Workshops/Trainings attended/organized:
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<i>International/National Conferences:</i>

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| <ol style="list-style-type: none"> 1. UGC sponsored one day state level seminar on Digital image processing and Pattern Recognition (DIPPR-2010). 2. UGC sponsored three days National level seminar on Digital image processing and Pattern Recognition (DIPPR-2011)-Nov-2011. 3. One day State level Tech Workshop on "Machine Learning", 9th Feb-2019. 4. 107th Indian Science Congress Conference held at University of Agricultural Sciences, GKVK Campus, Bangalore, Karnataka from 3-7th January, 2020. |
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<i>Training Programme :</i>

1. Short-Term Training Programme on Knowledge Discovery in Data Bases: Data Information & Knowledge (DInK'10) organized by the Center for Soft Computing Research (CSSR) of Indian Statistical Institute at Kolkata during Jan 11-15, 2010.
2. Orientation Programme in IT Oriented for College teachers conducted by the Academic Staff College, University of Kerala sponsored by the UGC from 13-07-2011 to 09-08-2011.
3. Teacher Empowerment Training for Government College Assistant Professor conducted by Karnataka Jnana Ayoga and Department of Collegiate Education, Government of Karnataka from 09-09-2011 to 15-09-2011.
4. Refresher Course in Mathematical Science (Computer Science) for College teachers conducted by the Academic Staff College, University of Mysore sponsored by the UGC from 04-12-2013 to 24-12-2013.
5. Resource person talk on "Scene Text Detection and Recognition", in One day UGC Sponsored State Level Seminar on "Emerging trends in Computer Technology" in collaboration with Arena Animation on 29th December 2013 at JSS college for women's, Mysore.
6. Refresher Course in Mathematical Science (Computer Science) for College teachers conducted by the UGC, Human Resource Development Centre, University of Mysore, Mysore- from 15-02-2016 to 06-03-2016.
7. One week Faculty Development Program on "Blockchain Technology & Cloud Computing using Amazon Web Service", 21st-to 25th January-2019, Organized by PES College of Engineering, Mandya, Sponsored by TEQIP Cell.
8. One Week Short Term Course on "Disaster Management", from 12th to 18th Feb-2019, Organized by the UGC-HRDC, University of Mysore, Manasagangotri, Mysore.
9. Faculty Development Program-2020, organized by Davangere University, Davangere, from 6th January to 13th January 2020.

Future Plan for the Department

- To Develop, Setup & Upgrade laboratories as per the revised syllabus & recent industry trends.
- To Organize State/National/International Conferences (Paper presentation & project competition)
- To Organize various short term courses, workshops, seminars and Faculty Development Programs.
- To start various activities under Research.
- To improve placement ratio with the help of Industries collaboration and Academic Collaborations (MOU)
- Enhance Industry Institution Interaction
- To establish collaborative research with industries leading to societal research.
- To get industry/government funded projects as well as consultancy.
- Develop an in house facility for the student's internship in collaborations with start ups.
- To establish incubation facility for small start-ups.

Personal Details		
Name	Dr. Basavanna M	
Address	Department of Studies in Computer Science, Davangere University, Shivangotri, Davangere-577 007	
Date of Birth	28/08/1973	
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Electronic address	Telephone- Mobile : 9448536782 E mail : basavanna_m@yahoo.com basavanna.m@davangereuniversity.ac.in Website: http://davangereuniversity.ac.in/computer-science-faculty/ Google Scholar Link : https://scholar.google.co.in/citations?user=mhF47YIAAAAJ&hl=en Research Gate Link : https://www.researchgate.net/profile/M_Basavanna	



(Dr. Basavanna M)