Dr. PRADEEP. N **BE (E &CE), M. Tech. (Comp. Engg.), Ph.D. (CS and E)**
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Google Scholar link: https://scholar.google.co.in/citations?user=Wo63lhcAAAAJ&hl=en

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RESEARCH INTEREST

Image Processing, Machine Learning, Data Mining, Pattern Recognition, Knowledge Discovery, Artificial Intelligence, Medical Image Analysis and Data Analytics.

TEACHING EXPERIENCE Having **17 years** of teaching experience and **8 years** in research

- Presently working as M.Tech. Coordinator from January 2015 to till date.
- Presently working as Associate Professor from December 2014 in Computer Science and Engineering, BIET, Davangere to till date.
- Worked as Assistant Professor in Computer Science and Engineering, B.I.E.T., Davangere from September 2008 to November 2014**.**
- Worked as Lecturer in Computer Science and Engineering, B.I.E.T., Davangere from September 2003 to August 2008.
- Working as an IGNOU Councilor at B.I.E.T. - Study Center from 2004 to till date.

INDUSTRIAL EXPERIENCE

- Worked as a Project Trainee at **VISTARA INFORMATICS (P) Ltd.** from Oct-2001 to May-2002.

EDUCATION

Ph.D. in Computer Science and Engineering from Visvesvaraya Technological University, Belagavi during the year 2014-15.

M.Tech. in Computer Engineering from SJCE College, Mysore. Affiliated to Visvesvaraya Technological University, Belagavi, during the year 2002
Percentage (First Class): **69%**

PROFESSIONAL MEMBERSHIP:

- Member for Association for Computing Machinery (ACM)
- Member of Indian Society for Technical Education (ISTE)
- Member for Institute of Engineers (IE)

SKILLS PROFILE

- Operating System: Linux, Windows9x/2000.
- Languages: C, C++, Matlab
- Networking Knowledge: TCP/IP, MPLS, DiffServ, QoS.
- Data Mining Tools Knowledge: Weka

PUBLICATIONS

Patent: Filed an Indian Patent on 26/07/2019 and its title is **"System of Smart Multi - Functional Traffic Light Using Organic Solar Cell"**, Patent application number is 201911030347 and it is published.

Books Edited

1. N. Pradeep, Sandeep Kautish, C.R. Nirmala, Vishal Goyal and Sonia Abdellatif, ***"Modern Techniques for Agricultural Disease Management and Crop Yield Prediction"***, 2019, IGI Publishers, USA. LCCN 2019005482| ISBN 9781522596325 (hardcover) | ISBN 9781522596332 (softcover) | ISBN 9781522596349 (ebook) **[Scopus Indexed]**
2. Anand Nayyar, Pradeep N, Sandeep Kautish and Sheng Lung Peng***, "Demystifying Big Data, Machine Learning and Deep Learning for Healthcare Analytics"***, to be published by Elsevier Publishers. [In progress]
3. Roshani Raut, Pranav Pathak, Sandeep Kautish and Pradeep N**, "*Intelligent Systems for Rehabilitation Engineering",*** to be published by Wiley , Scrivener Publishing. [In Progress]

Journal Special Issue

1. Sandeep Kautish, Ahmed J Obaid, Pradeep N, Rohit Sharma, Pradeep Kumar and Korhan Cengiz, ***"Sustainable Computing Solutions for Smart Healthcare Towards Smart Cities: With a Special Focus on COVID-19 Pandemic", EAI Endorsed Transaction on Smart Cities, ISSN 2518-3893 [In Progress]***

Book Chapters

1. Rajesh T M, Kavyashree Dalawai and Pradeep N, ***"Automatic Data Acquisition and Spot Disease Identification System in Plants Pathology Domain: Agricultural Intelligence System in Plant Pathology Domain",*** Modern Techniques for Agricultural Disease Management and Crop Yield Prediction, 2019, IGI Publishers, USA, DOI: 10.4018/978-1-

5225-9632-5.ch006 **[Scopus Indexed]**

2. Santosh K.C., Pradeep N. (2020), ***"Knowledge Discovery (Feature Identification) from Teeth, Wrist and Femur Images to Determine Human Age and Gender".*** In: Jain V., Chatterjee J. (eds) Machine Learning with Health Care Perspective. Learning and Analytics in Intelligent Systems, vol 13. Springer, Cham

In International Journals:

1. Mohan Kumar K N, S. Sampath, Mohammed Imran, Pradeep. N, ***"Prediction of Diagnostic Codes of Chronic Condition for Preventive Care"***, International Journal of Advanced Science and Technology, Vol. 29, No. 03, (2020), pp. 6454 - 6463 **[Scopus Indexed]**
2. Swetha V Patil and Pradeep N, "***Speech Translation System for Language Barrier Reduction***, International Research Journal of Engineering and Technology (IRJET), e-ISSN: 2395-0056, p-ISSN: 2395-0072, Vol. 06, Issue 08, pp 107-112, Aug 2019.
3. Apoorva T and Pradeep N, ***"Aspect Based Sentiment Analysis with Text Compression"***, International Journal of Computer Sciences and Engineering, ISSN 2347-2693 (E) Vol.5, Issue.8, pp.65-67, 2017.
4. Bhavana Shastry M and Pradeep N, ***"Comparison of Structure Based Models for Handwritten English Character Recognition",*** International Journal of Computer Sciences and Engineering, ISSN 2347-2693 (E) Vol.5, Issue.8, pp.65-67, 2017.
5. Vidyashree H S and Pradeep N, ***"Identification of Teeth, Wrist and Femur Bone Features for Age and Gender Identification,"*** International Journal of Computer Science Engineering (IJCSE), ISSN: 2319-7323, Vol. 6 No.01, pp. 29-41, Jan 2017.
6. Pradeep N, Girisha H, K. and K Karibasappa, **"*Segmentation and Feature Extraction of Tumors from Digital Mammograms",*** Computer Engineering and Intelligent Systems, IISTE, ISSN: 2222-1719(Paper) ISSN: 2222-2863(Online), Vol.3, No.4, pp.37-46, 2012.
7. Pradeep N, Girisha H, Sreepathi B and K. Karibasappa, ***"Feature Extraction of Mammograms"*** , International Journal of Bioinformatics Research, ISSN: 0975-9115, EISSN: 0975-9115, Vol. 4, Issue 1, pp.241-244, 2012.

In International and National Conferences:

1. Santosh K C and Pradeep N, "***Development of Human Age and Gender Identification system from Teeth, Wrist and Femur Images",*** In the Proceedings of Sustainable Computing in Science, Technology and Management (SUSCOM-2019), Amity University, Jaipur, pp. 640-644, 2019.
2. Pradeep N, Vinayaka, Vishal K P and Spurthi U Devaki, ***"IoT based Smart Home Security"***, 13th National Conference on Recent Trends in Computer Science and Engineering, SJBIT, Bengaluru, May 2018.
3. Pradeep N and Sandeep B, ***"Machine Learning Approach for the Identification of Diabetes Retinopathy and its Stages"*** , In the Proceedings of 2015 IEEE International Conference on Applied and Theoretical Computing and Communication Technology (ICATccT 2015), IEEE Part Number: CFP15D66-USB, ISBN: 978-1-4673-9222-8, pp.653 – 658, doi: 10.1109/ICATCCT.2015.7456906.
4. Pradeep N and Madhumathi V J, ***"Plant Identification System Using its Leaf Features"***, In the Proceedings of 2015 IEEE International Conference on Applied and Theoretical Computing and Communication Technology (ICATccT2015), IEEE Part Number: CFP15D66-USB, ISBN: 978-1-4673-9222-8, pp. 338–343, doi: 10.1109/ICATCCT. 2015.7456906.
5. Manjunath P Shirageri and Pradeep N ***"Secure Message Communication for Battlefield Soldiers Using Android",*** International Conference on Computer Science and Information Technology (ICCSIT), Tirupati, India, June 10 2012.
6. Manjunath P Shirageri and Pradeep N "***An Extensible framework for efficient secure SMS transfer over android platform"***, National conference on Innovation in Computers Information & Communication , Sasurie college of Engineering, Vijayamangalam, Tirupur, India, March 17 2012.
7. Manjunath P Shirageri and Pradeep N **"Secure Message Communication for Battlefield Soldiers Using Android"** , National Conference on Current Trends in Computer Science and Engineering , Jain University, Bangalore, May 26 2012.
8. Manjunath P Shirageri and Pradeep N ***"Current Attacks in Android: A Survey",*** National Conference on Emerging and Innovative Trends in Computer Science Vasavi College of Engineering, Ibrahimbagh, Hyderabad, May 1-2 2012.
9. Manjunath P Shirageri and Pradeep N ***"Location Based Services for Battlefield Soldiers Using Android"***, National Conference on Current Trends & Challenges in Information Technology , Sambhram Institute of Technology , Bangalore , May 11 2012.
10. Pradeep N and K Karibasappa ***"Comparative Study of tumor classification in***

Mammography images using ANN and SVM", International Symposium on Global Trends in Biomedical Informatics Research, Education, and commercialization, Chennai, January 11-12 2008.

11. Pradeep N , K Karibasappa, Shankaragouda B and V Ramaswamy ***"An Artificial Neural Network Approach for Mammography images Feature Extraction"*** In the Proceedings of International Conference on Cognition and Recognition, PES college of Engineering, Mandya, December 22 2005.
12. Pradeep N and K Karibasappa ***"Computer Aided Diagnosis of Solid Breast Nodules using Artificial Neural Network Approach and Expert System"***, 3rd National Conference on Mathematical and Computational Models (NCMCM 2005), Kaveraipettai, Tamilnadu. December 15-16 2005.
13. Pradeep N and K Karibasappa ***"An ANN approach for the detection of Solid BreastNodules"***, 2nd National Conference on DBMS and Networking, Erode Sengunthar Engineering College, Thudupathi, TamilNadu, September 8-9 2005.
14. Pradeep N and K Karibasappa ***"An ANN approach for the detection of Solid Breast Nodules",*** National Level Conference on Recent Trends in Information Technology, Sir M. Visvesvaraya Institute of Technology. August 2-3 2005.
15. Pradeep N and K Karibasappa ***"Computer-Aided Diagnosis of Solid Breast Nodules using an Artificial Neural Network Approach and Expert System",*** National Conference High Performance Computing and Communications, R.M.K Engineering College, Kavaraipettai, TamilNadu , September 15-16 2005.

ACHIEVEMENTS

1. Awarded as **Outstanding Teacher in Computer Science and Engineering,** during

   3rd Global Outreach Research and Education Summit and Awards 2019, organized by Global Outreach Research and Education Association.
2. Reviewed research articles for various reputed International Conferences and International Journals of Inderscience publications, IGI publications etc.
3. **Mission10X Certification** Course have been successfully completed and approved by Mission10X group from Wipro Technologies Pvt. Ltd., Bangalore.
4. Project entitled "**Implementing Secured Systems using Cued Click Points**" and **"Absolute Live Support"** has been awarded as "**Best Project"** in the CS & E Dept.

in the **In-House Project Exhibition** in year **2010** and **2011** respectively. The project was carried out under my guidance.

5. Two Times awarded as a top teacher during 2003-04 and 2007-08.
6. Students' project was selected for **KSCST- project exhibition** held at Basweshwara Engineering College, Bagalkot on 2nd and 3rd Sept 2005 under my guidance.
7. Won **2nd place** in shuttle-cock match conducted by Bio-Medical forum in 2006.
8. Four B.E. final year projects have been sponsored by KSCST under my guidance.

SHORT TERM COURSES/WORSHOPS

Attended

1. Attended 5 Day Faculty Development Program on "Data Science and Big Data Analytics", conducted by ICT Academy on 21-01-2020 to 25-01-2020 at Bapuji Institute of Engineering And Technology, Davangere.
2. Attended VTU TEQIP 1.3 Sponsored 5 days Faculty Development Programme on "Implementation of Outcome Based Education in Higher Educational Institutions", organized by SIT, Tumkuru, from 8th July to 12th July 2019.
3. Attended 5 days Faculty Development Programme on "Soft Computing Approaches to Image Processing and Pattern Recognition" conducted by CS & E dept., Basaveshwar Engineering College(Autonomous), Bagalokt from March 20th to 24th March 2010.
4. Attended 5 Days workshop on "High Impact Teaching Skills" conducted by Wipro Technologies Pvt. Ltd. conducted in BIET, Davangere from Feb 2nd to Feb 8th 2010.
5. Attended a Two day workshop on "Research Methodologies" conducted by VTU at MSRIT, Bangalore during May 2009.
7. Attended a QIP –Short Term Faculty Development program on "Ubiquitous Computing" conducted by IISC in Bangalore during 2005.Attended a short term course on "Constitution of India and Philosophical Ethics "conducted by BIET in Davangere during 2005.
8. Attended a short term course on "Quality of Service on Internet "conducted by BIET in Davangere during 2005.
9. Attended a short term course on "Unleash the Full Potential of Power Linux" conducted by BIET in Davangere during 2004.
10. Attended one day workshop to finalize the VTU syllabus for B.E. (CSE/ISE) branches during 2004, held at KLE's Gogte Institute of Technology., Belagavi.

RESPONSIBILITIES

- Department (Programme) NBA Coordinator
- Coordinator for New Generation Innovation and Entrepreneurship Development Centre (NewGen IEDC), Sponsored by National Science & Technology Entrepreneurship Development Board (NSTEDB), Department Science and Technology, Government of India.
- Placement Officer
- SPOC for Smart Hackathon 2017, 2018 ,2019 and 2020
- Team member for preparing, Mandatory disclosure and National Board of Accreditation (NBA) document.
- Student advisor for higher semester students.
- Involved in CS & E forum activities.
- Member of Infosys initiated Campus Connect Programme for both Hard Skills and Soft Skills.

Project Guided:

For B.E.: 54 batches

For M.Tech. : 28 students

SUBJECTS TAUGHT

For B.E.

Programming the Web, Object Oriented Programming with C++., Unix and Shell Programming, Storage Area Networks, Operating Systems, System Simulation and Modelling, Computer Networks, Computer Professional and Philosophical Ethics, Software Engineering, Object Oriented Analysis and Design, Multimedia Communications, Database Management Systems, JAVA

For M.Tech.

Cyber Security and Cyber Law, Research Methodology, OOAD and Design Patterns, Topics in Multimedia Communications, Protocol Engineering, Advances in Storage Area Networks, Information and Network Security, Pattern Recognition, Cloud Computing.

Ph.D. Thesis: "Analysis and Classification of Breast Tumors using Support Vector Machines"

It is a complex disease that affects women and men of all ages and ethnic groups. Despite decades of productive research on breast cancer diagnosis and treatment,

preventing this cancer is the only way to reduce the human toll of this disease that affects 1 in 8 women in their lifetime. This prevention can be made if breast cancer is detected at the earlier stage itself. Early detection of Breast Cancer can be achieved using Digital Mammography, typically through detection of characteristic masses or tumors and/or micro calcifications. Retrospective studies revealed that, in current breast cancer screenings approximately 15 to 30 percent of breast cancer cases are missed by radiologists. With the advances in digital image processing techniques, it is envisaged that radiologists will have opportunities to decrease this margin of error and hence, improve their diagnosis.

The goal of this research is to increase the diagnostic accuracy of image processing and machine learning techniques for optimum classification between malignant and benign abnormalities in digital mammograms by reducing the number of misclassified cancers. Various features like texture, shape and statistical features are extracted from the tumor segmented from the ROI of the input image. Different kernels of SVM are experimented using LIBSVM and an evaluation is made to judge which kernel will produce a promising results. The experimentation is carried out on two datasets: One is publicly available dataset and other from collecting digital mammograms from a local hospital. A Graphical User Interface is developed as a part of Computer Aided Diagnosis system which helps the radiologists for the diagnosis of tumor present in the digital mammogram. The resulting computerized classifier system will subsequently act as a second reader after the manual detection by the radiologists.

Project at Vistara Informatics (P) Ltd.: QoS with DiffServ 1.
Project

Duration **:** 8 Months (Oct -2001 to May-2002)

Roles **:** As an active team member in developing the code and testing.

Domain **:** Linux.

Traffic Generator Tools Used: MGEN, DREC

Description: Recent years have seen an increase in the Internet usage, resulting in a scarcity of network resources. Internet Service Providers traditionally provided the same level of service to all customers, namely best effort service. But the increased Internet usage resulted in a performance hit of highly mission critical applications. At the same time, newer applications that needed better service quality emerged. As a result, the service providers felt the need to provide differential levels of service to the customers. DiffServ provides a wide range of services through a combination of the following functions.

- Setting bits in the TOS octet at network edges and administrative boundaries

- Using those bits to determine how packets are treated by the routers inside the network
- Conditioning the marked packets at network boundaries in accordance with the requirements of each service.

2. Project during Graduation:

Title: "PC Based Automatic Monitoring and Controlling of Power System".

Operating System: Windows 98.

Team Members: 4.

Description: In this project, the line voltage is continuously monitored, converted to its equivalent digital value and fed to a PC. Certain initial values are stored in PC, which are the limiting values of voltage. Whenever, the line voltage exceeds the specified value of voltage (i.e., stored in the PC) the PC controls a relay which will isolated the power line from the domestic transformer. Here in this project only switching action of relay is shown. The code was written in `C' language.

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