Dr. DEEPTHI P S

Assistant Professor
Department of Computer Science and Engineering
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Career Objective

- A sanguine academician with substantial logical skills and urge for knowledge. A passionate researcher with knowledge in machine learning and data mining. Career objective is to be a consummate professional in the academic sector and to learn and contribute to the goals of the organization by leveraging my knowledge and analytical skills.

Employment History

Jan 2020 – · · · ·	**Assistant Professor,** LBS Institute of Technology for Women, Poojappura, Thiruvananthapuram (A Government of Kerala Undertaking)
June 2016 – Dec 2019	**Assistant Professor,** Department of Computer Science and Engineering, LBS College of Engineering Kasaragod (A Government of Kerala Undertaking)
Sep 2010 – June 2013	**Assistant Professor,** Department of Computer Science and Engineering, Lourdes Matha College of Science and Technology, Trivandrum
Feb 2008 – Aug 2010	**Lecturer,** Department of Computer Science and Engineering, Lourdes Matha College of Science and Technology, Trivandrum

Education

2013 – 2018	**PhD in Computer Science and Engineering, University of Kerala** Thesis title: *Enhanced Clustering Techniques for Gene Expression Data* Research carried out at Indian Institute of Technology for Women-Kerala (IIITM-K, currently Digital University Kerala) with SPEED-IT Research fellowship from Kerala State IT Mission, Govt of Kerala, June 2013 - June 2016
2006 – 2008	**M.E Computer Science and Engineering, Anna University, Chennai**
2002 – 2006	**B.E Computer Science and Engineering, Anna University, Chennai**

Research Interests

- Data Mining, Machine Learning, Swarm Intelligence, Optimization, Data analytics

Awards and Fellowships

- Qualified UGC NET exam held in December 2012
- SPEED-IT Research fellowship from Kerala State IT Mission, Govt of Kerala, June 2013
- ACM Student Travel Scholarship for presenting paper at Second Conference on Data Sciences (CoDS), organised by Indian chapter of the ACM Special Interest Group on Knowledge Discovery in Databases (ACM IKDD) in association with ACM SIGKDD, March 18-21, 2015 Bangalore, India

Awards and Fellowships (continued)

- ACM sponsored Diversity and Inclusion track scholarship to attend ACM India 6th Joint International Conference on Data Science and Management of Data CODS COMAD 2023 organized by IIT Bombay, Jan 4-7, 2023

Research, PG Theses and Project Guidance

- **PhD Scholars**
  Ms. Sree Vidhya K S
  Full time scholar, APJ Abdul Kalam Kerala Technological University, 2021
  Topic of research: Underwater image enhancement
  Ms. Renetha J B
  Part time scholar, APJ Abdul Kalam Kerala Technological University, 2021
  Topic of research: Cyberbullying detection in multilingual documents
  Ms. Gayathri K S
  Part time scholar, APJ Abdul Kalam Kerala Technological University, 2021
  Topic of research: Copy move forgery detection using machine learning techniques

- **PG Theses Guided**
  Renju R S – Crop yield prediction using AI (Completed in June 2022)
  Bhagya J – Cyberbullying Analysis on Social Media (Completed in June 2021)
  Nimisha M K – Web API classification (Completed in June 2019)

- **UG Projects Guided (Recent)**
  Sign language recognition using deep learning (2023)
  Wellness portal using microservices (2023)
  Crowd density estimation from images (2021)
  Face mask detection and social distancing to curb Covid – 19 (2021)
  Malware detection using machine learning (2021)
  Plant disease detection using deep learning (2020)
  Legal Chatbot (2020)
  AmbiGo - Digitalizing Ambulance service (2018) – Initiated by Kasaragod District Administration, Kerala

Courses Handled

- Machine Learning, Artificial Intelligence, Data Mining and Warehousing, Knowledge Engineering, Data Analytics, Compiler Design, Data Structures, Design and Analysis of Algorithms, Web Technologies, Distributed Computing, Software Engineering, Principles of Programming Languages, Programming in C, Object Oriented Programming in Java

Research Publications

Journal Articles

1. J. B. Renetha and P. S. Deepthi, "A survey on methods for detecting cyberbullying in multilingual documents," *Research Cell: An International Journal of Engineering Science*, vol. 35, 2023.

2. K. S. Gayathri and P. S. Deepthi, "An overview of copy move forgery detection approaches," *Computer Science and Engineering: An International Journal*, vol. 12, 2022.

3. M. K. Nimisha and P. S. Deepthi, "A deep learning approach for web api classification," *Journal of Computational Information Systems*, vol. 15, 2019.

4   P. S. Deepthi and S. M. Thampi, "Predicting cancer subtypes from microarray data using semi-supervised fuzzy c-means algorithm," *Journal of Intelligent and Fuzzy Systems*, vol. 32, no. 4: pp. 2797-2805, 2017.

Conference Proceedings/Presentations

1   S. L. Reeja, T. Soumya, and P. S. Deepthi, "A study on vision based human activity recognition approaches," in *Proceedings of the 3rd International Conference on Modeling, Simulation and Optimization, NIT-Silchar, December 21-23*, 2022.

2   R. S. Renju and P. S. Deepthi, "A review of crop yield prediction strategies based on machine learning and deep learning," in *Proceedings of the IEEE International Conference on Computing, Communication, Security and Intelligent Systems, SCMS School of Engineering and Technology, June 23-25, 2022 (IC3SIS 2022)*, 2022, pp. 39–47.

3   J. Bhagya and P. S. Deepthi, "Cyberbullying detection on social media using svm," in *Inventive Systems and Control, Lecture Notes in Network Systems, Springer*, 2021, pp. 17–27.

4   P. A. Keerthana, S. B. Nayana, R. Neeraja Krishna, S. Sheba, and P. S. Deepthi, "Plant disease detection using convolutional neural network and remedy recommendation system," in *Emerging Technologies in Data Mining and Information Security, Advances in Intelligent Systems and Computing, Springer, 2021*, 2021, pp. 587–595.

5   R. S. Renju and P. S. Deepthi, "Early detection of heart disease using feature selection and classification techniques," in *International Conference on Big Data, Machine Learning and Applications, BigDML 2021, Dec 19-20, 2021, NIT Silchar*, 2021.

6   M. T. Sabu and P. S. Deepthi, "A privacy preserving and safety aware semi-supervised model for dissecting cancer samples," in *9th International Conference on Computational Collective Intelligence (ICCCI 2017), Cyprus, LNAI, Springer,*, 2017, pp. 129–138.

7   M. T. Sabu and P. S. Deepthi, "A metaheuristic approach for simultaneous gene selection and clustering of microarray data," in *Advances in Intelligent Systems and Computing Series, Springer Verlag*, 2016, pp. 449–461.

8   M. T. Sabu and P. S. Deepthi, "Pso based feature selection for clustering gene expression data," in *International Conference on Signal Processing, Informatics, Communication and Energy Systems (SPICES), NIT-Calicut, IEEE*, 2015, pp. 1–5.

9   M. T. Sabu and P. S. Deepthi, "Unsupervised gene selection using particle swarm optimization and k-means," in *Second ACM IKDD Conference on Data Sciences, Banglore, ACM*, 2015, pp. 134–135.

10   M. T. Sabu and P. S. Deepthi, "Cluster analysis for gene expression data," in *International Symposium on Signal Processing and Intelligent Recognition Systems, SIRS - 2014 (poster)*, 2014.

11   M. T. Sabu and P. S. Deepthi, "A review of algorithms for clustering large datasets," in *1st International Conference on Business Analytics and Intelligence, IIM-Bangalore, Dec 11-13*, 2013.

Book Chapters

1   M. T. Sabu and P. S. Deepthi, *Trends in Mining Biological Big Data*. Computational Intelligence Applications in Business Intelligence, Big Data Analytics, Auerbach Publications, CRC Press, Taylor, and Francis Group, pp. 97-117, 2017, ISBN: 9781498761017.

Talks delivered

- Talk on "Unsupervised Deep Learning" in the KTU sponsored Faculty Development Programme on "Deep Learning" organized by the department of Computer Science and Engineering, LBS College of Engineering Kasaragod, Kerala from 24-26 January 2023.

- Resource person for the one week online FDP on "Advances in Natural Langauge Processing using AI" organized by the Dept of CSE, Vimal Jyothi Engineering College, Kannur, Kerala in association with CSI, March 14-18, 2022.

- Talk on "Machine Learning using Python" in online webinar conducted by Dept of CSE, M.A.M School of Engineering, Chennai, Tamil Nadu, Sep 29, 2021.

- Talk on "Data Analytics using Python", in four day FDP on "Future Trends of Data Analytics", organized by Dept of CSE, Lourdes Matha College of Science and Technology in association with CSI, Thiruvananthapuram, Kerala, June 15 – 18, 2021.

- Talk on "Practical Machine Learning with Python" in the AICTE sponsored two weeks online FDP on "Machine Learning for Computational Biology" conducted by the department of CSE PSNA College of Engineering and Technology, Dindigul, Tamil Nadu on February 2, 2021.

- Talk on "Deep learning in Computer Vision – Recent Trends" in the AICTE sponsored two weeks online FDP on "Computer Vision and Image Processing: Research Issues, Innovations and Application" conducted by the department of ECE, PSNA College of Engineering and Technology, Dindigul, Tamil Nadu on January 10, 2021.

- Keynote speaker, National Conference on Advances in Computing and Communication Technologies NCACCT 2020, organized by the department of ECE, LBS Institute of Technology for Women Thiruvananthapuram, 10 - 11 December 2020

- Session on "OBS Studio and YouTube Streaming" in the online training programme on "Online Class Delivery Modes and Platforms" organized by the department of Computer Engineering, Govt. Women's Polytechnic College, Thiruvananthapuram, Kerala on September 9, 2020.

- Webinar on "Machine Learning using Python" organized by the department of CSE, Musaliyar College of Engineering, Thiruvananthapuram, Kerala on August 14, 2020.

- Session on "Data Pre-processing Techniques" in the AICTE sponsored 6 days Short Term Training Programme on "Data Analytics and Machine Learning" organized by the department of CSE, Amal Jyothi College of Engineering, Kottayam, Kerala from 3-6 August 2020.

- Talk on "Machine Learning" in the one-day webinar conducted by the department of CSE and Computer Applications, Narayanaguru College of Engineering, Kanyakumari, Tamil Nadu on 10th July 2020.

- Talk on "Introduction to Machine Learning" in the four-day skill development programme on "Shaping the future using Technology and Skills" conducted by the Dept of Information Technology, Panimalar Institute of Technology, Chennai, Tamil Nadu on 29th May 2020.

Talks delivered (continued)

- Online lectures on Data Mining and Warehousing as part of the lecture series organized by Additional Skill Acquisition Programme (ASAP) Kerala, Higher Education Department, Govt. of Kerala (lectures organized during Covid pandemic for engineering students across the state), May 2020.

- Hands-on session on "Documentation using LaTex" organized by IEEE chapter, LBS College of Engineering Kasaragod, Kerala 27th March 2019.

- Session on "Research issues in Swarm Intelligence" at LBS Institute of Technology for Women, Thiruvananthapuram, Kerala on 13th June 2016.

- Session on "Introduction to Machine Learning" at LBS Institute of Technology for Women, Thiruvananthapuram, Kerala on 14th September 2015.

Training/Faculty Development Programmes Attended (Recent)

- TalentNext, Wipro Certified Faculty Program, 15/11/21 to 3/11/21
- FDP on "Trajectory to success in Research", Government Engineering College, Sreekrishnapuram, Kerala, 25/10/21 to 30/10/21
- CSI sponsored FDP on "Future Trends of Data Analytics", Lourdes Matha College of Science and Technology, Thiruvananthapuram, Kerala, 15/06/2021 to 18/06/2021
- FDP on "Recent Advancements in Image Processing and Computer Vision:2021" organized by Institute of Technology for Women, Poojappura, Thiruvananthapuram, Kerala, 17/05/2021 to 21/05/2021
- FDP on "Outcome based education and NBA accreditation process" at LBS Institute of Technology for Women, Poojappura, Thiruvananthapuram, Kerala, 4/1/2021 to 18/1/2021
- Completed 12 weeks NPTEL FDP on "Programming in Java", IIT, Kharagpur, Sep-Dec, 2020 with a score of 86%
- AICTE FDP on "Block chain" organized by LBS College of Engineering, Kasaragod, Kerala, 2/11/2020 to 6/11/2020
- Completed course on "Applied Machine Learning in Python" in Coursera, 2020
- FDP on Saleforce "Become Job ready for developers" organized by ICT Academy of Kerala, 27/07/2020 to 31/07/2020
- AICTE FDP on "Data Analytics and Machine Learning" organized by Amal Jyothi College of Engineering, Kottayam, Kerala 3/08/2020 to 08/08/2020

Skills

Languages	Strong reading, writing and speaking competencies for English, Malayalam and Hindi
Coding	Java, PHP, C, Python, SQL, XML/XSL
Databases	MySQL, PostgreSQL.
Web Dev	HTML, CSS, JavaScript, Apache Web Server, Tomcat Web Server.
Platforms/Tools	Windows, Linux, WEKA, R, LaTeX
Misc.	Academic research, teaching, training, consultation, mentoring

Professional Services

- Reviewer, Measurement: Sensors Journal, Elsevier
- Programme Coordinator, B.Tech in Information Technology, National Board of Accreditation, LBS Institute of Technology for Women, Thiruvananthapuram
- Technical Programme Committee Chair and Session Chair, Second IEEE International Conference of Computational Systems and Communication, LBS Institute of Technology for Women, Thiruvananthapuram, 3 -4 March, 2023
- Scrutiny committee member, M.Tech CSE, Mar Baselios College of Engineering and Technology, Thiruvananthapuram
- Research Supervisor, APJ Abdul Kalam Kerala Technological University
- Doctoral Committee member, APJ Abdul Kalam Kerala Technological University
- Member, Syllabus Revision Committee, APJ Abdul Kalam Kerala Technological University
- Question paper setter at Cochin University of Science and Technology, APJ Abdul Kalam Technological University
- External Examiner, Kerala University Of Digital Sciences, Innovation And Technology
- Member, Departmental Advisory Committee, Dept of CSE, Lourdes Matha College of Science and Technology, Thiruvananthapuram
- Reviewer, 7th International Conference on Fuzzy Systems and Data Mining (FSDM), Japan, 2021
- Co-chair, National Conference on Advances in Computing and Communication Technologies NCACCT 2020, organized by the department of ECE, LBS Institute of Technology for Women Thiruvananthapuram, 10 - 11 December 2020
- Session chair, National Conference on Advances in Communication, Signal Processing and Instrumentation NCACSI 2020, organized by the department of ECE, LBS Institute of Technology for Women Thiruvananthapuram, 20 - 21 August 2020
- Reviewer, 5th International Conference on Fuzzy Systems and Data Mining FSDM, Japan, 2019
- Translated English transcripts of NPTEL course on "Programming Data Structures and Algorithms" offered by IIT Madras to Malayalam
- Co-Chair, International Conference on Advances in Security and Computing, LBS College of Engineering, Kasaragod, July 26-27, 2019
- Reviewer, 2nd International Conference on Advances in Security and Computing (ICASC 2021), LBS College of Engineering, Kasaragod July 26-27, 2019
- Member, Event Management Committee, ACM Annual Event, January 21-22, 2016
- Secretary, ACM Trivandrum Professional Chapter (Nov 2014-Nov 2015)
- ACM Professional member since June 2013
- Served as reviewer for ICACCI 2013, ICACCI 2014 and ICACCI 2015 and collocated workshops
- Served as reviewer for IEEE SPICES, February 19-21, 2015, NIT Calicut, India
- Reviewer, International Journal of Humanitarian Technology, Inderscience publishers
- Coordinated Workshop on Design and Analysis of Algorithms at IIITM-K, 24-29 April 2015
- Teaching assistance for MSc courses at IIITM-K. Subjects include Object Oriented programming and Java, Secure Internet Programming, High Performance Computing, Data structures and Algorithms
- Served as session chair for Pattern Recognition, Clustering, and Classification - I(VisionNet/SIPR) and Communication and Signal Processing (VisionNet/SIPR)-II collocated with ICACCI 2015, 10-13 August 2015 held at SCMS Kochi
- Actively involved in coordinating International Conference on Computing and Network Communications (CoCoNet'15), 16-19 December 2015, Trivandrum

Personal Details

- Date of Birth: 24/10/1984
- Marital Status: Married
- Address for Communication: TC 42/3617, Mayookham, Narayana Lane, Thiruvananthapuram Kerala, India - 695012

References

Available on Request

I hereby declare that the information furnished above is true to the best of my knowledge.

Dr. DEEPTHI P S