D Y PATIL COLLEGE OF ENGINEERING, AKURDI, PUNE 44

DEPARTMENT OF COMPUTER ENGINEERING

NEWS LETTER -FEBRURAY 2026

Faculty Achievements/ Participation :

1.Taniya Bhattacharjee has successfully participated & completed Industry Collaborated One Week National Level FDP on “Secure IoT Application Development and Cloud Integration using Git and AWS IoT Core” from 02nd February to 07th February, 2026 jointly organized by Department of Electronics and Telecommunication Engineering, Walchand Institute of Technology, Solapur and Rama Raman Technologies, Solapur.

2.Ms.Fharina Sayyad published paper entitled “ Transformer-based Bilateral Encoder for Teeth Recognition and Bone Loss in Digital Radiographs ”, published in springer Nature link.

S.A. P. D. J. PATHASHALA'S
WALCHAND INSTITUTE OF TECHNOLOGY, SOLAPUR
(AN AUTONOMOUS INSTITUTE)

CERTIFICATE
OF PARTICIPATION

It is certified that Taniya Bhattacharjee of D Y Patil College of Engineering, Pune, Maharashtra has successfully participated & completed Industry Collaborated One Week National Level FDP on "Secure IoT Application Development and Cloud Integration using Git and AWS IoT Core" from 02nd February to 07th February, 2026 jointly organized by Department of Electronics and Telecommunication Engineering, Walchand Institute of Technology, Solapur and Rama Raman Technologies, Solapur.

MRS. P. O. KULKARNI, Director, Rama Raman Technologies
DR. MS. A. V. THALANGE, Coordinator
DR. V. A. ATHAVALE, Principal

Home > International Journal of Computational Intelligence Systems > Article

Transformer–based Bilateral Encoder for Teeth Recognition and Bone Loss in Digital Radiographs

Research | Open access | Published: 21 February 2026
article number , (2026) Cite this article

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We are providing an unedited version of this manuscript to give early access to its findings. Before final publication, the manuscript will undergo further editing. Please note there may be errors present which affect the content, and all legal disclaimers apply.

International Journal of Computational Intelligence Systems

Aims and scope →
Submit manuscript →

Sections | References

Abstract
Data Availability
References
Author information

Faculty Achievements/ Participation

Name of Faculty Coordinator : Ms. Supriya Sathe

Dr. Mrs. D. A. Phalke
Head of Department

D Y PATIL COLLEGE OF ENGINEERING, AKURDI, PUNE 44

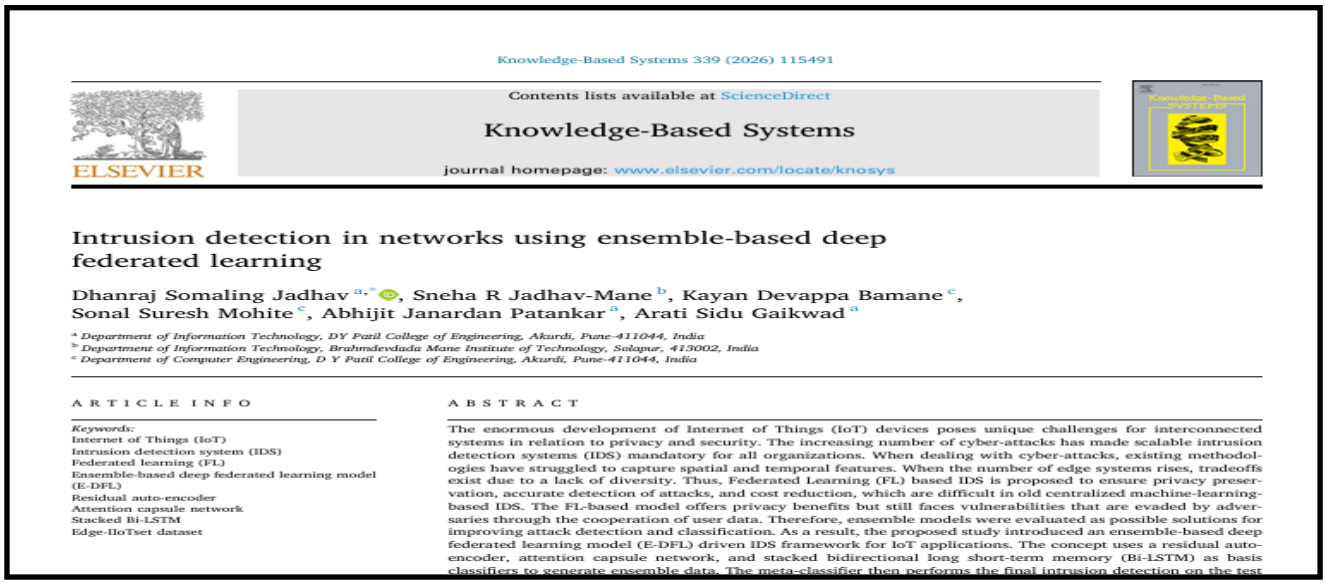
DEPARTMENT OF COMPUTER ENGINEERING

NEWS LETTER -FEBRURAY 2026

Faculty Achievements/ Participation :

3.Ms.Sonal Mohite has published paper entitled " Intrusion detection in networks using ensemble-based deep federated learning " in Elsevier

4.Dr Kalyan Bamane has published the book entitled "Machine Learning for Early Detection of Chronic Diseases: A Case Study in Diabetes Prediction", published in Scopus.



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ELSEVIER

Intrusion detection in networks using ensemble-based deep federated learning

Dhanraj Somaling Jadhav [a,*], Sneha R Jadhav-Mane [b], Kayan Devappa Bamane [c], Sonal Suresh Mohite [c], Abhijit Janardan Patankar [a], Arati Sidu Gaikwad [a]

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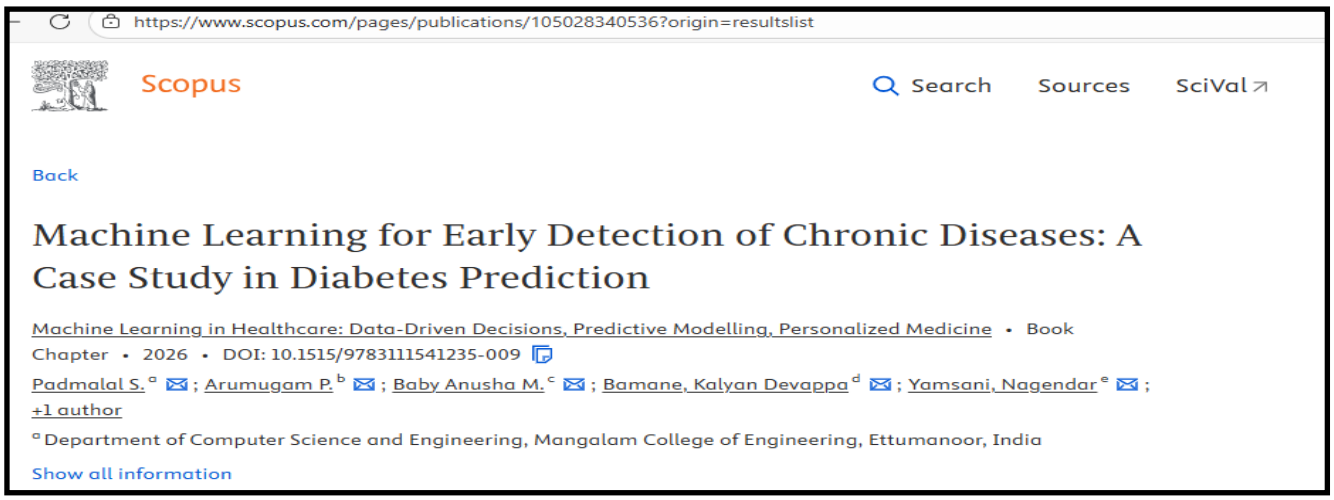
ARTICLE INFO

Keywords:
Internet of Things (IoT)
Intrusion detection system (IDS)
Federated learning (FL)
Ensemble-based deep federated learning model (E-DFL)
Residual auto-encoder
Attention capsule network
Stacked Bi-LSTM
Edge-IIoTset dataset

ABSTRACT

The enormous development of Internet of Things (IoT) devices poses unique challenges for interconnected systems in relation to privacy and security. The increasing number of cyber-attacks has made scalable intrusion detection systems (IDS) mandatory for all organizations. When dealing with cyber-attacks, existing methodologies have struggled to capture spatial and temporal features. When the number of edge systems rises, tradeoffs exist due to a lack of diversity. Thus, Federated Learning (FL) based IDS is proposed to ensure privacy preservation, accurate detection of attacks, and cost reduction, which are difficult in old centralized machine-learning-based IDS. The FL-based model offers privacy benefits but still faces vulnerabilities that are evaded by adversaries through the cooperation of user data. Therefore, ensemble models were evaluated as possible solutions for improving attack detection and classification. As a result, the proposed study introduced an ensemble-based deep federated learning model (E-DFL) driven IDS framework for IoT applications. The concept uses a residual auto-encoder, attention capsule network, and stacked bidirectional long short-term memory (Bi-LSTM) as basis classifiers to generate ensemble data. The meta-classifier then performs the final intrusion detection on the test



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Back

Machine Learning for Early Detection of Chronic Diseases: A Case Study in Diabetes Prediction

Machine Learning in Healthcare: Data-Driven Decisions, Predictive Modelling, Personalized Medicine • Book Chapter • 2026 • DOI: 10.1515/9783111541235-009

Padmalal S. [a] ; Arumugam P. [b] ; Baby Anusha M. [c] ; Bamane, Kalyan Devappa [d] ; Yamsani, Nagendar [e] ; +1 author

[a] Department of Computer Science and Engineering, Mangalam College of Engineering, Ettumanoor, India

Show all information

Faculty Achievements/ Participation

Name of Faculty Coordinator : Ms. Supriya Sathe

Dr. Mrs. D. A. Phalke
Head of Department

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DEPARTMENT OF COMPUTER ENGINEERING

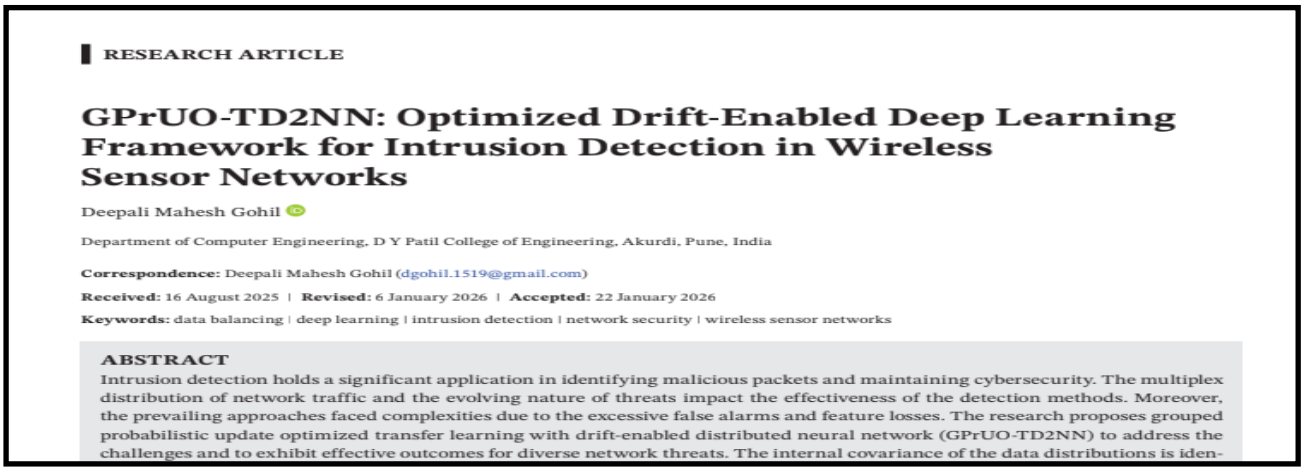
NEWS LETTER -FEBRURAY 2026

Faculty Achievements/ Participation :

5.Dr.Deepali Gohil has published the paper entitled " GPrUO- TD2NN: Optimized Drift- Enabled Deep Learning Framework for Intrusion Detection in Wireless Sensor Networks " in International Journal of Communication Systems

6.Dr.M. A. Potey and Dr. V. L. Kolhe attended AI IMPACT SUMMIT 2026 India, New Delhi on 17/02/2026

7.Dr.D. A. Phalke Participant at National Conclave on Research and Deep Technologies for Sustainable Bharat 2047 on 28/02/2026



RESEARCH ARTICLE

GPrUO-TD2NN: Optimized Drift-Enabled Deep Learning Framework for Intrusion Detection in Wireless Sensor Networks

Deepali Mahesh Gohil

Department of Computer Engineering, D Y Patil College of Engineering, Akurdi, Pune, India

Correspondence: Deepali Mahesh Gohil (dgohil.1519@gmail.com)

Received: 16 August 2025 | **Revised:** 6 January 2026 | **Accepted:** 22 January 2026

Keywords: data balancing | deep learning | intrusion detection | network security | wireless sensor networks

ABSTRACT

Intrusion detection holds a significant application in identifying malicious packets and maintaining cybersecurity. The multiplex distribution of network traffic and the evolving nature of threats impact the effectiveness of the detection methods. Moreover, the prevailing approaches faced complexities due to the excessive false alarms and feature losses. The research proposes grouped probabilistic update optimized transfer learning with drift-enabled distributed neural network (GPrUO-TD2NN) to address the challenges and to exhibit effective outcomes for diverse network threats. The internal covariance of the data distributions is iden-

Faculty Achievements/ Participation

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Head of Department

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NEWS LETTER -FEBRURAY 2026

Faculty Achievements/ Participation :

8.Dr.D.M. Gohil delivered the session Emerson International School students in their AI Fest on AI in education on 12th Feb 2026

9.Dr.D.M. Gohil has conducted an workshop on Salesforce Technology for SY to BE students on 7th Feb 2026

Faculty Achievements/ Participation

Name of Faculty Coordinator : Ms. Supriya Sathe

Dr. Mrs. D. A. Phalke
Head of Department

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DEPARTMENT OF COMPUTER ENGINEERING

NEWS LETTER -FEBRURAY 2026

Students' Achievements/ Participation :

1. Carrom (Boys) – Utkarsh Bhosale and Ritesh Kaushik secured Runner-up positions and won Silver Medals.

2. Badminton (Girls) – Arya Dummane, Snehal Pillai, Aditi Patre, Komla Pawar, and Tejaswini Jaganath finished as Runner-up and earned Silver Medals.

3.Chess (Girls) – Prajakta Jadhav and Manasvi Bhosale achieved Runner-up positions

4. Football (Boys) – Winners and won the Gold Medal.

5. Box Cricket (Girls) – Finished Runner-up and won the Silver Medal.

6. Cricket (Boys) – Secured 2nd Runner-up and earned the Bronze Medal.

Students Achievements/ Participation

Name of Faculty Coordinator : Ms. Supriya Sathe

Dr. Mrs. D. A. Phalke

Head of Department

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DEPARTMENT OF COMPUTER ENGINEERING

NEWS LETTER -FEBRURAY 2026

Students' Achievements/ Participation :

Students Achievements/ Participation

Name of Faculty Coordinator : Ms. Supriya Sathe

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NEWS LETTER -FEBRURAY 2026

Department Activities:

1.Industrail visit for Third Year students from 17/02/2026 to 25/02/2026 to industry Solitaire Infosys Pvt Ltd. at Chandigarh on 19th Feb 26, at Sai shawls factory at Manali on 20th Feb 26 and Golden Temple Mega Kitchen (Langar), Amritsar

2.IKS visit organized for F Y students to KORIGAD FORT & TIGER POINT on 18 February 2026, co-ordinator for the visit were Ms. Swati Suryawanshi and Ms. Radhika Gore.

Department Activities

Name of Faculty Coordinator : Ms. Supriya Sathe

Dr.Mrs.D.A.Phalke

Head of Department

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NEWS LETTER -FEBRURAY 2026

Department Activities:

3.Dr. Deepali M. Gohil organized the Salesforce Workshop on Saturday, 07 th February 2026 from 10:00 am to 5:00 pm at Dyanprasad Sabhagruh recourse person was alumni Mr. Akshay Nile 2023 Passout.Total 25 students were participated in the workshop.

4.One-day Industrial visit organized for S Y B.Tech students to International Expo by Maharashtra Entrepreneurs Association at Agriculture Ground Sinchan Nagar, Pune. Coordinator for the visit were Ms. Sneha Kumbhar and and Ms. Ashiwarya , 25 students were participated for the visit

Department Activities

Name of Faculty Coordinator : Ms. Supriya Sathe

Dr.Mrs.D.A.Phalke

Head of Department