

Activity Report of IT Dept. for Jan. 2025

Newsletter

1. Expert Lecture/Seminar/Courses Organized by Department during Jan. 2025:

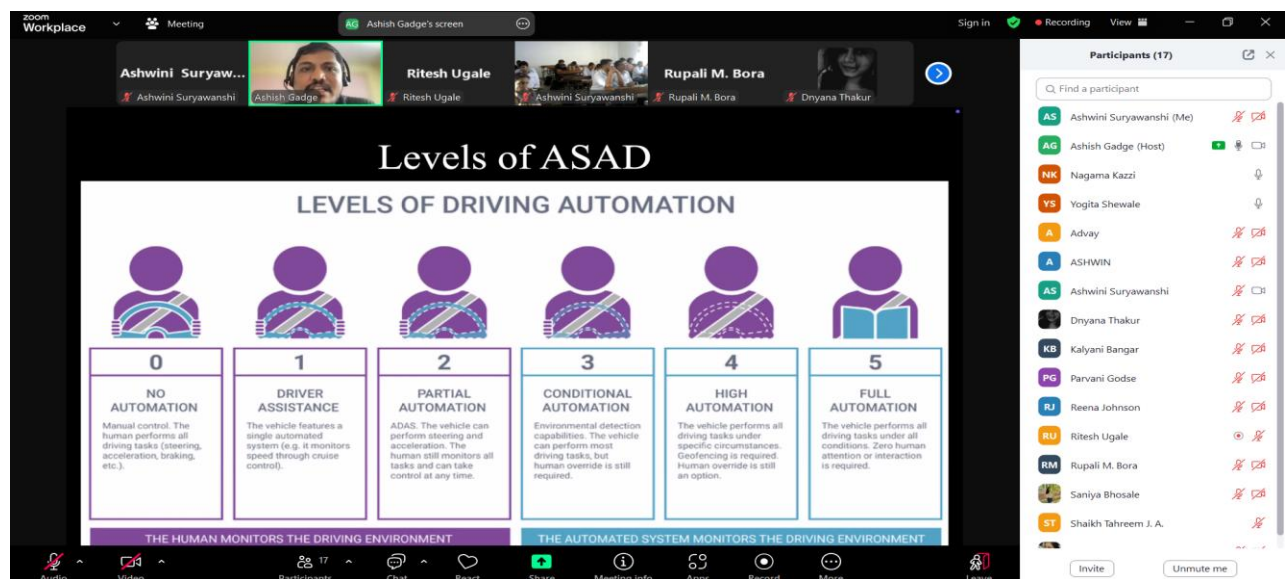
Department of Information Technology had organized expert talk on **“The Visual Code: Demystifying Data with Powerful Tools”** on 3rd Jan 2025. expert talk was conducted by **Mr. Santosh Mundhe – A Data Expert.**



Department of Information Technology had organized expert talk on **“Building Confidence and Self-Esteem”** on 13th Jan 2025. expert talk was conducted by **Mrs. Tanuja Date, Ex-Associate Professor at KKWIEE&R.**



Department of Information Technology had organized online expert talk on “Use of AIML in Automotive Industry” on 24th Jan 2025. Expert talk was conducted by **Mr. Ashish Apparao Gadge, Senior Software Engineer (ADAS) APTIV Components India Private Limited.**



2. Papers Presented/Published in the Journal by Staff during Jan. 2025:

Title of Paper: “Early detection of gynecological malignancies using ensemble deep learning models: ResNet50 and inception V3”

Name of Journal: Published by Elsevier Ltd.

Volume and Issue: 14 December 2024; Received in revised form 22 January 2025; Accepted 24 January 2025)

Names of Authors: Chetna Vaid Kwatra, Harpreet Kaur, Monika Mangla, Arun Singh, **Swapnali N. Tambe**, Saiprasad Potharaju d.

Abstract: Background and objective: Improving patient outcomes and lowering death rates depend on the early identification of gynecological cancers. This work intends to improve the accuracy and dependability of early gynecological tumor diagnosis by means of a hybrid deep learning model combining ResNet50 and Inception v3 architectures. **Methods:** The proposed ensemble model combines multi-scale feature extraction of Inception v3 with the deep residual learning capability of ResNet50. A significant number of gynecological images were employed for training, testing, and assessment of the proposed model. By entailing accuracy, sensitivity, specificity, and F1 score, among other parameters the performance of the model was assessed. **Results:** The first experiment depicted displays that the ensemble model performed better than single models with a training accuracy of 99.80 %, a validation accuracy of 99.80 %, and a test accuracy of 99.80 %. Comparing the two studies done in the current research, the model has shown to have a high sensitivity of 99 %, specificity of 99 %, and F1 score of 0.99, making it better in the identification of gynecological cancers and significantly reducing low true negatives and low true positives.

KEYWORDS : Gynecological malignancies, Deep learning, ResNet50, Inception V3, Medical image analysis.

Dr. Darshan Vishwasrao Medhane has presented a paper entitled “**Innovative Outlier Detection with SEBOST: A Novel Hybrid Ensemble Approach**” in 2nd International Conference on Computational Research and Data Analytics (ICCRDA-2025) organized by Duy Tan University, Da Nang, Vietnam on 17th -18th January 2025.

Prof. Dr. Preeti Bhamre has presented a paper entitled “**Smart AI Reading Application for Visually Impaired People**” in the 4th International Conference on Emerging Electronics and Automation (E2A-2024) organized by the Department of Electronics and Instrumentation Engineering, National Institute of Technology Silchar, Assam, India.

Abstract.: The "Smart AI Reading App for Visually Impaired People" empowers visually impaired individuals by providing voice-driven access to printed materials. This innovative app uses a smartphone's camera to capture images of physical books, employing image recognition and text to-speech technologies to audibly relay the content. Unlike existing solutions, it prioritizes comprehensive voice integration and efficiency. Key features include real-time image recognition, text-to-speech conversion, guidance for accurate page alignment, and automated image capture. When users point their phone's camera at text, the app captures an image, processes it through a specialized AI, and audibly describes the content. This process allows users to instantly hear and understand their surroundings and printed material. Additional features include text summarization and a user-friendly interface tailored for visually impaired individuals. The project involves developing a functional app compatible with Android smartphones, utilizing Android app development tools, image recognition APIs, text-to-speech technology, and user interface design resources. The project team includes developers, designers, accessibility experts, and quality assurance testers. In conclusion, the "Smart AI Reading App for Visually Impaired People" leverages cutting-edge technology to enhance accessibility for the visually impaired.

Keywords: Smart AI Reading App, visually impaired, voice-driven access, image recognition, text-to-speech, Android, iOS.

3. Papers Presented by Students during Jan. 2025: NIL
4. Industrial Training/Workshop done by Staff during Jan. 2025: NIL
5. Industrial Visit/Field visit organized by department for student during Jan. 2025: NIL
6. Training and Placement Cell during Jan. 2025:

Sr. no	Name of Student	Name of Company
1	Mrunmai Satish Bhade	HSBC Technology
2	Avadhut Rajendra Jagtap	Tech Mahindra
3	Bhavesh Vitthal Marathe	Tech Mahindra
4	Ninad Kailas Dhikale	Tech Mahindra
5	Nirajkumar Satyendra yadav	Tech Mahindra
6	Parth Chaitanya Gosavi	Tech Mahindra
7	Raj Roshan Nandale	Tech Mahindra
8	Sagar Dadaji Ahire	Tech Mahindra
9	Satviki Manish Chaudhari	Tech Mahindra
10	Tanishka sahebrao borse	Tech Mahindra
11	Vikas Madhukar Sangale	Tech Mahindra
12	Sanchita Sanjay Weljali	Tech Mahindra / HSBC Technology

7. Books Purchased in Central Library during Jan. 2025: **NIL**
8. Forthcoming event in the month March and April Jan. 2025: **NIL**
9. Achievements: