

## K. S. SCHOOL OF ENGINEERING AND MANAGEMENT

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## **DEPARTMENT OF Computer Science and Engineering**

Event name	: Techsaksham
Date of Event	: 17-02-2025 to 01-03-2025
Venue	: CSE lab, Alpha-Delta Seminar Hall, Dept. of AI & DS,
Number of participants	133
<b>Targeted Audience</b>	: VI Semester, Dept. of CSE
<u>Objective</u>	: To enhance skills of students
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DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE Is Organising a Workshop on	
APPLIED ARTIFICIAL INTELLIGENCE - PRACTICAL IMPLEMENTATION	
In Association with DEPARTMENTS OF CSE, CSBS, AND ECE	
Program Sponsors   Microsoft   Microsoft   DATES: 17 Feb, 2025 - 01 Mar, 2025 TIMINGS: 09:30 am - 04:00pm CENUE: AD Seminar Hall, CSBS Lab, CSE Lab Microsoft Microso	



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### **DEPARTMENT OF Computer Science and Engineering**

Department of Computer Science and Engineering organized workshop on "Applied Artificial Intelligence" for VI Semester students. It was conducted by Edunet Foundation sponsored by Microsoft and SAP.

# **Resource Person: Adarsh P and P Raja**

Feedback: Feedback from students' is positive

# **Glimpses of Expert Talk:**

### Day 1

Topic Covered: Introduction to Machine Learning

Subtopics: Basics of ML, Supervised vs Unsupervised Learning

Activities:

- - Data preprocessing and feature selection
- - Built a basic classification model using Scikit-learn

Outcome: Understood the foundations of ML and implemented a simple supervised model

### Day 2

Topic Covered: Supervised Machine Learning Techniques

Subtopics: Linear Regression, Logistic Regression

Activities:

- - Performed Vehicle Performance Analysis using Linear Regression
- - Evaluated using MSE and RMSE

Outcome: Learned how regression models work and their evaluation

## Day 3

Topic Covered: Classification Algorithms

Subtopics: Support Vector Machine (SVM), Decision Trees

Activities:

- - Built classification models using real-world datasets
- - Evaluated models with confusion matrix and accuracy

Outcome: Gained hands-on experience with decision-based and margin-based classifiers



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## Day 4

Topic Covered: Evaluation Metrics & ML Pipelines

Subtopics: Model validation techniques, Accuracy, Precision, Recall

Activities:

- - Developed an End-to-End Diabetes Prediction Model
- - Deployed using Streamlit

Outcome: Understood full ML workflow from training to deployment.

## Day 5

Topic Covered: Artificial Neural Networks (ANN)

Subtopics: ANN Architecture, Forward & Backward Propagation, Activation Functions

Activities:

- Implemented Customer Churn Prediction using ANN
- - Used ReLU, Sigmoid, SoftMax in model layers

Outcome: Built and tuned a neural network for classification tasks

## Day 6

Topic Covered: Optimization Techniques in Deep Learning

Subtopics: Gradient Descent, Adam Optimizer

Activities:

• - Applied optimization methods to improve ANN training

Outcome: Improved training speed and model accuracy



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## Day 7

Topic Covered: Convolutional Neural Networks (CNN)

Subtopics: CNN Architecture, Feature Maps, Pooling

#### Activities:

- - Developed Potato Leaf Disease Detection system using CNN
- - Deployed via Streamlit

Outcome: Understood image processing and real-time deployment

### Day 8

Topic Covered: Natural Language Processing (NLP)

Subtopics: Tokenization, Lemmatization, Stemming, Word Embeddings

Activities:

- - Worked on Kindle Review Sentiment Analysis
- Used One-Hot Encoding, Bag of Words, TF-IDF
   Outcome: Learned multiple vectorization techniques and sentiment classification

### Day 9

Topic Covered: Advanced NLP & Generative AI

Subtopics: Summarization Techniques, API-based NLP Integration

Activities:

• - Built PDF Summarizer using Google Gemini API, FSSAI context

Outcome: Applied generative AI to extract summaries from documents



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## Day 10

Topic Covered: Vector Databases & Semantic

Search Subtopics: Chroma DB, Vector Embeddings

Activities:

• - Implemented Chroma DB for semantic document retrieval

Outcome: Learned to handle unstructured text using vector-based search

## Day 11

Topic Covered: Final Project Presentation

Subtopics:

Activities:

- - Presented capstone projects covering all learned concepts
- - Received feedback and evaluation from mentors and peers

Outcome: Successfully demonstrated practical applications of AI across domains

## **Regional Project Showcase – Achievements**

On 25th March, students from KSSEM participated in the Regional Project Showcase held at Government Engineering College, Hassan.

From our college, 11 teams were selected, including 6 from the Computer Science Department:

- - Sanjay M D and Team WanderWISE
- - Bhoomika P Desai and Team SentiFly Sentiment Analysis of Indian Airline Reviews
- - D Shreyas and Team Disaster Management Lack of Proper Response and Relay Mechanisms
- - Pavan and Team Crop Yield Prediction
- - Padmashree M and Team Chatbot for Educational Institution
- - Rushitha and Team Research Paper Analyser



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#### **ACHIEVEMENTS AT THE EVENT:**

□ First Place: Sanjay M D and Team



### □ First Runner-Up: Rushitha and Team



These achievements reflect the dedication, knowledge, and skills gained during the training sessions and the ability to apply AI concepts to solve real-world problems.



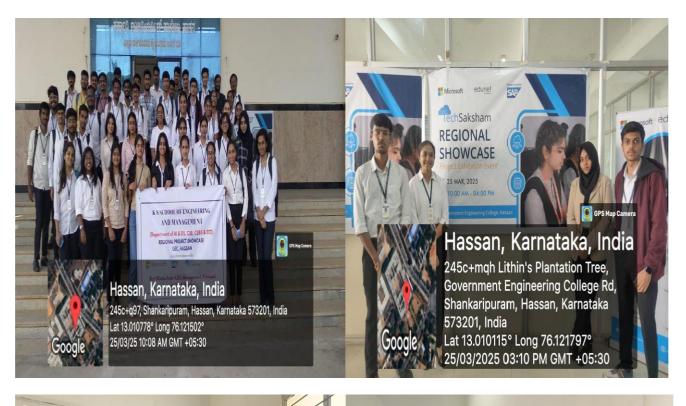
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#### Few Images of the Event







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Faculty Incharge

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