

GUDDALA YASWANTH SAI

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Education

Indian Institute of Information Technology and Management

B.tech in Computer Science and Engineering

Expected May 2027

Gwalior, Madhya Pradesh

Relevant Coursework

- Data Structures and Algorithms
- Computer Architecture
- Database Management Systems
- Operating Systems
- Object Oriented Programming
- Computer Networks

Projects

- Breast Cancer Detection Model** | Python, SVM, Kernel, SMOTE May 2024
- Designed and deployed a high-accuracy breast cancer detection model using classification algorithms like **Logistic Regression**, **Decision Tree**, **Random Forest**, and **SVM**, achieving **98% accuracy** in malignancy prediction.
 - Employed **feature engineering** and **hyperparameter tuning**, improving model accuracy, and integrated **Pipelines** to reduce training and validation time by **30%**.
 - Co-authored a **peer-reviewed research paper** published in **IEEE**, presenting a novel classification model that achieved **98% accuracy**, and validated on **2+ benchmark datasets**, demonstrating strong applicability in real-world scenarios.
- Human Activity Recognition Model** | Python, LSTM, Attention August 2024
- Engineered a robust **Human Activity Recognition (HAR)** model leveraging **LSTM networks** integrated with **Attention Mechanisms** to capture temporal dependencies and intricate patterns in sequential data.
 - Achieved **97% accuracy** by enabling the model to selectively focus on critical data points, significantly improving classification of **complex and overlapping activities**.
 - Validated the model across **multiple datasets**, outperforming traditional methods and demonstrating strong potential for deployment in **wearable tech**, **smart environments**, and **healthcare monitoring systems**.
- Edge-Based Driver Drowsiness Detection System** | Python, TensorFlow, YoLoV5, LSTM March 2024
- Designed a **two-stage drowsiness detection system** using **EfficientNet-B0** for facial analysis and **LSTM with attention** for behavior prediction, achieving **over 97% local detection accuracy**.
 - Deployed **real-time inference** on **Raspberry Pi 4** using lightweight CNNs with **30ms/ROI** latency, outperforming VGG16 by **50% faster inference** and **96% parameter reduction**.
 - Implemented **OffSEC architecture** for privacy-preserving, distributed edge computation, enabling secure alerts and scalable vehicle integration.
 - Explored **fleet-level detection** via **YoLoV5** and **LSTM-attention model**, predicting drowsy driving behavior patterns using simulated Foursquare mobility data.

Technical Skills

Languages: C/C++, JavaScript, Python, SQL

Frameworks and Libraries: React.js, Tailwind CSS, Material , Bootstrap

DevOps & Tools: Git, Github, Jupyter Notebook, Canva, Google Collab

Databases: MySQL, MongoDB

Achievements

- Secured 11,400 (AIR) out of 11,13,325 candidates JEE Main making it top 1.02%.
- Secured **2nd Place** in Group Discussion Competition of College Coding Society.

Leadership & Extracurricular

Joint Secretary– SAC Cultural

IIITM Gwalior

- Spearheaded the organization of Student Activity Council at ABV-IIITM, coordinating multiple events and managing logistics for successful execution.

Core Committee member- Aurora'24

IIITM Gwalior

- Led the Central India's largest cultural festival with **300+ volunteers** to execute **5+** multi-track events for 2,000+ attendees, streamlining logistics and reducing scheduling conflicts.