

# GUDDALA YASWANTH SAI

7997882456

yaswanth04suresh@gmail.com

LinkedIn

## 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
- Operating Systems
- Computer Architecture
- Object Oriented Programming
- Database Management Systems
- 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

IITM 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

IITM 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.