

# SASMITA SAHOO

Bhubaneswar, Odisha, India

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## Education

Centurion University Of Technology and Management

2021 – Present

B.Tech - Computer Science and Engineering - **CGPA: 9.63**

Jatni, Odisha

Rama Devi Women's Higher Secondary School

2019 – 2021

Intermediate - Science Stream - **Percentage: 85%**

Bhubaneswar, Odisha

## Technicak Skills

**Programming Languages:** Python, SQL, Java

**Machine Learning:** scikit-learn, TensorFlow, PyTorch, Hugging Face

**Data Visualization:** Power BI, Tableau, Matplotlib, Seaborn

**Computer Vision NLP:** OpenCV, YOLO, CNN, Mediapipe, NLTK, BERT, Transformers

**Tools Technologies:** Git, GitHub, Google Cloud Platform (GCP), AWS, Figma

## Projects

AI Chatbot for Legal Assistance | Python, NLP, ML, MongoDB, Tensorflow

Ongoing

- **Developing** an interactive **chatbot** for the Department of Justice website to provide real-time information on judicial data, including court details, case statuses, and eCourt services.
- Implemented a **learning-based system** to handle large datasets and enhance user interactions, offering features like **live case streaming**, **traffic fine payments**, and **Tele Law services**.

Sign Language Translator for Text, Hand Signs, and Voice | Java, Android Studio

July 2024

- **Developed** "MaunMitra," a real-time **sign language interpreter**, capable of translating text to sign gestures, sign gestures to text, and voice to text.
- Leveraged **CNN** and **YOLO V8 models** to achieve **95% accuracy** in sign language gesture detection.
- Deployed the system on a **web platform**, improving **accessibility** and **user engagement** by **40%**.

Evapotranspiration Modeling Using Explainable AI | Python, SHAP, Tensorflow, LSTM

Feb 2024

- **Developed** machine learning models (**LSTM** and **XGBoost**) to accurately predict potential evapotranspiration (PET), achieving an **MSE of 0.12**, enhancing **irrigation scheduling** and **water use efficiency**.
- Utilized **SHAP values** for model interpretability, identifying key features such as **soil radiation**, and providing actionable insights for improving agricultural water management strategies.

## Publications

Enhancing University Students' Well-Being through NLP-Driven Emotional Intelligence Validated by Facial Recognition for Digital Twin Solutions.

Springer Smartcom, 2024

Developed a system combining **sensors**, **student feedback**, and **facial recognition models** to monitor classroom conditions. Analyzed data from 100+ students using **NLP** and **CNN models**, achieving **96% sentiment analysis** accuracy and **93% emotional detection** accuracy which helped to improved overall learning environments by **85%**.

Multi-class classification of chest x-ray images with optimised features

IEEE , May 2024

Developed an ML-based framework integrating **EfficientNet-B0**, **LBP**, and **HOG** for feature extraction, optimized using Bayesian techniques. Achieved **97% accuracy** with SVM in classifying diseases like pneumonia and lung cancer, enabling early detection and treatment.

## Extracurricular

Achieved Champion milestone in **Google Cloud Arcade Facilitator 2024** and **Diamond League in Google Cloud**.

Received **Best Technical Award - IEEE**: for **Sign Language Interpreter Project**.

Awarded for excellence in **International Youth Mathematics Challenge**: **astrophysics**.

Secured **50+ first positions** in state and national **debates competition**.

Participated in **SIH** and **Bharatiya Antarikshya Hackathon**.

**Math SME (2019 - Present)**: Mentored and taught advanced mathematics.