

SAURABH KUMAR JHA

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Education

Indian Institute of Information Technology, Jabalpur

India

Bachelor of Technology in Mechanical Engineering

Nov 2020 – Jul 2024

Relevant Coursework

- Machine Learning
- Data Analytics with Python
- Data Base Management System
- Fundamentals Of Robotics
- Data Structures and Algorithms
- IIOT
- Python
- PRML
- TinyML

Internships & Work experience

Kukbit SL

Dec 2023 – Jan 2024

Machine Learning Engineer Intern

- Applied machine learning techniques and algorithms, contributing to the Developed ML model and gaining hands-on experience in a dynamic startup environment.
- Technologies Used: Python, Pandas, scikit-learn, Machine learning

Projects

Detecting Defects in Ultrasonic Welding | *Numpy, TensorFlow, FLask, HTML, CSS* | [Link](#)

Aug 2023 - Nov 2023

- Developed a **self-made** image dataset utilizing acrylic sheets, conducted cutting and welding processes, and employed **image processing** techniques. Constructed a deep learning model based on 2D convolutional **neural networks** to detect defects in **ultrasonic welding** parts.
- Achieved **98%** accuracy on the testing dataset.

Emotion Detection from Speech | *TensorFlow, TensorFlow-Lite* | [Link](#)

May 2024 - Jul 2024

- Designed and implemented an emotion detection system using an **LSTM** model on the **Arduino Nano 33 BLE** Sense board, achieving **96.37%** accuracy. Collected speech data from Kaggle and optimized the model with **Post-training Quantization**, reducing its size by **91.65%**.

Sentiment Analysis | *Numpy, Pandas, Seaborn, Matplotlib, Nltk, Sklearn* | [Link](#)

Aug 2023 - Oct 2023

- Developed a sentiment analysis model to determine the **sentiment** polarity of textual data using machine learning techniques.
- This project has proved to be quite effective in proactively addressing customer sentiments and resolving **immediate** product related **issues** in real time.

Recommendation Engine | *Pandas, Sklearn, HTML, CSS, JavaScript, Flask* | [Link](#)

Oct 2022 - Apr 2023

- Developed a **collaborative filtering-based** recommendation system to suggest personalized book recommendations to users based on **ratings**, with features like login and database.

Skills

Languages: C++(Data Structures and Algorithms), Python, SQL, HTML, CSS, JavaScript

Technologies/Frameworks: Ensemble Tech., Flask, Django, GitHub, Git, Excel, Web Development, **Statistics**

Developer Tools: VS Code, Jupyter notebook, Power-BI, Tableau, Postman, Docker, AWS

Data Science: Machine Learning, deep learning, visualisation, NLP, LangChain, Web scraping

AI tools: ChatGPT, Blackbox AI, Julius AI

Database: MySQL, MongoDB, SQLite

Soft Skills: Quick learner, Problem-solving, Teamwork, Leadership

Achievements & Voluntary Work

- **Team Leader:** BTP Project - Voice-Based Health Monitoring (Laryngeal Cancer)
- Developed **15+** ML models, each solving unique and complex problems.
- **5-star in SQL** on HackerRank
- Solve 650+ problem on different coding platforms: CodeChef, HackerRank, GeeksforGeeks, LeetCode
- **Jagrati (An initiative by IIITians):** Student Volunteer