

Harsh Sahu

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EDUCATION

SRM Institute of Technology

Bachelor of Technology in CSE (Data Science), Current CGPA: 9.50

Chennai, Tamil Nadu

Sept. 2022 – Present

Bharat Ratan School

Class 12th, Percentage: 92.8

Seoni, Madhya Pradesh

April 2020 – May 2021

Kendriya Vidyalaya (CBSE)

Class 10th, Percentage: 92.8

Seoni, Madhya Pradesh

April 2018 – May 2019

EXPERIENCE

Backend Java Intern

Rento(StartUp-SRM DEI)

BRC Chennai

Feb 2025 – Present

- Developing backend services using Java for a startup's property management platform.
- Implementing robust and scalable backend architecture to support core business functionalities.

Data Engineer Intern

Zidio Development

Remote

Jan 2024 – Feb 2024

- Optimized a deep learning-based segmentation system, reducing processing time by 40%.
- Refactored backend data pipelines with Python and Flask, improving API response time.
- Collaborated with engineers to deploy the system using Docker and Google Cloud.

Research Intern

National Chung Cheng University, Taiwan

Remote

Sept 2023 – Nov 2023

- Developed a real-time detection system with OpenPose and C++, improving accuracy by 40%.
- Optimized image processing pipelines, reducing inference time by 20%.
- Implemented a scalable backend using FastAPI and PostgreSQL for video data storage.

Software Engineer Intern

SRM Hospitals

Chennai

May 2023 – July 2023

- Built a hospital management app using Flutter and Firebase, ensuring 99% uptime.
- Developed REST APIs and authentication, improving data retrieval speed by 50%.
- Optimized real-time appointment scheduling, reducing API latency by 25%.

PROJECTS

Accident Detection Using Machine Learning and CNN

Python, VGG19, InceptionV3

- Published a paper on an accident detection framework using machine learning and convolutional neural networks (CNN) for real-time video analysis.
- Utilized a large dataset to train the model, achieving high accuracy in identifying potential accident scenarios in real-time.
- Combined object detection and motion tracking techniques to accurately detect accident events in various environments.
- Optimized the model to function effectively within limited processing constraints, enhancing real-time applicability.

ChromaGenius: Deep Learning Image Colorization

Python, GANs

- Trained a deep learning model for image colorization using Generative Adversarial Networks (GANs).
- Executed adversarial training, enabling the generator to produce realistic colorizations of grayscale images.
- Achieved high-quality results by refining the model through iterative training, enhancing performance by 20%.
- Reduced training time by 25% through model optimization techniques.

Document AI: PDF Data Extraction

Layout LLM Model v3

- Developed a PDF data extraction system using Layout LLM Model v3 for accurate, structured data extraction from unstructured documents.

- Automated workflows, achieving a 40% increase in processing efficiency and reducing manual effort.
- Advanced to the finals in a competitive showcase, highlighting the project's innovative impact and practical relevance.
- Optimized processing speed by implementing the Retrieval-Augmented Generation (RAG) technique, improving document parsing time by 20%.

AI-Powered Stock Market Prediction System	Python, TensorFlow, LSTM
<ul style="list-style-type: none"> • Designed a deep learning-based stock market prediction system using LSTM models to analyze historical stock prices and forecast trends. • Enhanced model accuracy by integrating technical indicators like RSI and MACD as additional features. • Implemented a pipeline for data preprocessing, feature engineering, and model evaluation, achieving a prediction accuracy improvement of 30%. • Reduced prediction latency by 20% through optimization of model architecture and hyperparameter tuning. 	

Peer-to-Peer Energy Trading Platform	Database, Python, Blockchain
<ul style="list-style-type: none"> • Constructed a decentralized platform for peer-to-peer energy trading using blockchain technology, reducing transaction costs by 30%. • Designed a secure transaction system facilitating energy exchange between producers and consumers, improving trading efficiency by 25%. • Developed smart contracts to automate trading processes, increasing transparency by 40% and reducing manual intervention. • Integrated real-time analytics tools, optimizing energy usage patterns and enabling users to reduce energy costs by up to 15%. 	

Secure Data Tokenization & PII Detection System	Python, FastAPI, Encryption, ML
<ul style="list-style-type: none"> • Developed an end-to-end pipeline for encrypting and tokenizing sensitive data using AES encryption. • Implemented a machine learning model to detect Personally Identifiable Information (PII) in structured and unstructured data. • Optimized API response time by 30% using FastAPI and parallel processing techniques. 	

ACHIEVEMENTS

Winner, HakTrax Alexa Developer Club Hackathon	
Second Prize, Layers 3.0 Competition	
TCS Codevita InterNational Coding Competition Rank-496	View Credential
Research Paper on Accident Detection	View Credential
Meta Hacker's Cup Participation Top 2000	View Credential

CERTIFICATIONS

Google AI ML AICTE Virtual Internship	View Credential
NPTEL Python for Data Science (Top 2%)	View Credential
NPTEL Programming in Java	View Credential
Altair Data Science Virtual Internship (AICTE)	View Credential
Intel Unnati Lab	View Credential
AWS Skill Builder Machine Learning	View Credential

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL,Kotlin,Flutter, JavaScript
Frameworks: React, Node.js, Flask, Django,Angular.js
Developer Tools: Git, Docker, Firebase, Google Cloud Platform, VS Code, Google Colab, Android Studio
Libraries: Pandas, NumPy, Matplotlib, OpenCV, Scikit-learn, TensorFlow, Keras, PyTorch, SciPy, seaborn, Plotly
Competitive Skills: LeetCode (1568),Competitive Programming (Codeforces 1300)