

# SUDIPTA RAY

+91-8617203206 ◇ India

sudiptaray1215@gmail.com ◇ linkedin.com/in/yourprofile ◇ github.com/yourgithub

## PROFESSIONAL SUMMARY

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Results-focused Machine Learning Engineer specializing in Deep Learning, Computer Vision, and FPGA optimization. Skilled at building scalable AI/ML applications integrating hardware acceleration and edge AI.

## SKILLS

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- Programming: Python, C, Java, JavaScript, HTML, CSS
- Frameworks: TensorFlow, Keras, PyTorch, OpenCV, Pandas, NumPy, Matplotlib, React, Docker, AWS Cloud
- Specializations: Machine Learning, Deep Learning, CNN, Transformers, FPGA Deployment, Image Segmentation, Edge AI
- Languages: English, Hindi, Bengali

## WORK EXPERIENCE

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### Research Intern

January 2025 – Present

Q-UNet++ Lightweight Model for FPGAs

- Implemented biomedical image segmentation using lightweight UNet++ achieving 96% accuracy and 94% Dice score.
- Designed attention-gated CNN models, attaining 99% accuracy, deployed with Vitis AI quantization.

### Research Intern

January 2025 – Present

Real-Time Epilepsy Detection, IEEE

- Built CNN + LSTM system for epilepsy detection with 98% accuracy and 95% F1-score.
- Developed interactive dashboard for live EEG visualization and alerts.

## EDUCATION

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### B.Tech in Electronics and Communication Engineering

2023 – 2027

Institute of Engineering and Management, Kolkata

CGPA: 9.64

### ISC (Class XII)

2023

Sri Aurobindo Institute of Education, Kolkata

Percentage: 89.6%

## CERTIFICATIONS

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Machine Learning Specialization – Stanford University (Coursera)

Generative AI: Introduction and Applications – IBM

AI & Data Science – CMATER, Jadavpur University