

Abha Mahato

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Summary

Highly motivated and enthusiastic third-year B.Tech student specializing in Computer Science with a focus on Data Science. With over two years of hands-on experience in machine learning, generative models, and software development, I'm passionate about solving real-world problems using cutting-edge technology. Actively seeking opportunities to apply my skills in data science, AI, and full-stack development within innovative teams.

Education

BTech in Computer Science(Data Science specialization)
ITER Bhubaneswar | 2022-26
CGPA-8.44

Internships & Training

Engineer Trainee

BSNL | Feb 2025 - Mar 2025

- Gained in-depth exposure to telecommunication systems including GSM architecture, optical fiber communication, telephone exchanges, and broadband systems.
- Worked alongside engineers on infrastructure maintenance and automation planning for telecom switching networks.Studied the working principles of Next Generation Networks (NGN), SDH (Synchronous Digital Hierarchy), and FTTH (Fiber to the Home).
- Collaborated with BSNL professionals to understand challenges in scalability, reliability, and security of telecom services.

Software Developer Fellow

Headstarter | Jul 2024 - Sep 2024

- Designed and developed artificial intelligence and machine learning solutions for real-world industry projects, focusing on delivering innovation and fostering teamwork.
- Collaborated with a cross-functional team of 5 members to deliver high-quality software adhering to strict industry standards and deadlines.
- Successfully gained comprehensive hands-on experience in agile software development methodologies and project management best practices, completing 3 projects within a 2-month timeframe.

Projects

AI-Powered Maintenance Bill Optimization (Hackathon Project, 2024)

- Created predictive maintenance models utilizing Extreme Gradient Boosting (XGBoost) to forecast costs with an accuracy rate of 92% and optimize resource allocation by 30%.
- Automated billing processes using Power BI, resulting in a reduction of manual work by 40% and improving visualization accuracy for 100+ dynamic reports.
- Implemented a Gen AI chatbot to handle 200+ resident feedback inputs, significantly enhancing user experience.

ISRO Lunar Crater Image Enhancement (2024)

- Deployed Generative Adversarial Networks (GANs) and OpenCV techniques to enhance the Permanently Shadowed Regions (PSR) of lunar craters from Chandrayaan-2 data.
- Achieved a resolution enhancement factor of 4x through advanced image upscaling techniques using SRGAN and ESRGAN models.
- Contributed to the successful processing of 500+ images, aiding in ISRO's lunar analysis research initiatives.

Architectural Image Generation with DCGAN (2024)

- Applied Deep Convolutional Generative Adversarial Network (DCGAN) techniques to generate realistic architectural images from a dataset comprising 50,000+ building images.
- Optimized network architecture and hyperparameters, reducing training time by 25% and achieving high-quality output suitable for architectural planning.

Skills

- Programming Languages: Java, Python, C++/C,C#
- Machine Learning & AI: GANs (CGAN, DCGAN, SRGAN, ESRGAN), XGBoost, RNN, Supervised & Unsupervised Learning, Classification, Regression
- Data Science Tools: Power BI, NumPy, Pandas, Scikit-learn, TensorFlow, feature engineering
- Web Development:HTML, CSS, JavaScript, REST APIs, Firebase
- Soft Skills: Agile Methodologies, Problem Solving, Team Collaboration

Certifications

- Data Science BootCamp – GeeksforGeeks
- IBM Data Science Professional Certificate – IBM
- Machine Learning specialization– Stanford Online
- Introduction to Generative AI – Google Cloud
- Software Engineer Intern Certificate-hackerRank

Achievements

- Top 10 finalist in a college hackathon (2024) out of 95 competing teams, focusing on generative artificial intelligence and computer vision.
- Accepted as a Software Developer Fellow at Headstarter, completing 3 real-world AI-focused projects.