Ritesh Kumar

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Career Objective

An aspiring Software Engineer with strong analytical and problem-solving skills, eager to contribute to impaction in real-world projects. Seeking a challenging role in the IT industry where I can apply my technical expertise and dedication to drive innovation and support organizational growth.

Education

Arka Jain University, Jamshedpur CGPA: 8.23
Bachelor of Technology in Computer Science and Engineering (AI & ML) *Aug. 2022 – May 2026*

Experience

Machine Learning Intern May – July 2025
NIT Jamshedpur *Jamshedpur (On-Site)*

- Executed a machine learning project on steel surface defect detection leveraging real-world industrial datasets.
- Applied advanced computer vision techniques, including edge detection and feature extraction, for accurate defect classification.
- Attained 99.65% accuracy on a six-class steel surface dataset and 99.72% accuracy on the NEU-DET benchmark dataset.

Backend Intern May – July 2024
TechMantra Global *Noida (Remote)*

- Acquired comprehensive expertise in SpringBoot for backend development, skilled in designing and managing scalable applications.
- Developed responsive user interfaces with HTML, CSS, Bootstrap, and JavaScript to optimize user experience and engagement.
- Implemented RESTful APIs and integrated them with MySQL databases to ensure efficient data management.

Projects

Age Gender Prediction | Python *GitHub Link*

* Developed a Python application for age and gender prediction using pre-trained models and Haar Cascade face detection.
* Processed cropped facial images through a deep learning model to accurately predict age and gender (male/female).
* Optimized model performance with pre-processing and efficient image handling for faster and reliable predictions.

Food& Recipe API App | JavaScript, HTML, Bootstrap, CSS *GitHub Link*

* Developed a web application to search food recipes by ingredients, leveraging the MealDB API for real-time data.
* Built and integrated RESTful APIs with databases to ensure scalable and efficient backend operations.
* Implemented a responsive, mobile-friendly UI using Bootstrap for optimal user experience across devices.

Steel Surface Defect Detection | Python, CNN, Deep Learning *GitHub Link*

* Engineered a Convolutional Neural Network (CNN) to classify steel surface defects into six categories: crazing, inclusion, patches, pitted_surface, rolled-in_scale, and scratches.
* Achieved 99.65% validation accuracy using an Attention-based Multi-Feature Fusion CNN (AMFF-CNN), leveraging attention mechanisms and multi-level feature integration to enhance model precision and generalization over conventional CNNs.
* Enhanced model generalization using data augmentation and optimized training with batch normalization and dropout.

Achievements

Awarded a **Merit Certificate in Naukri Campus Young Turks - Round 1 (2025)** with a 98.61 percentile score.
National Finalist, IBM Hackathon 2025 — Cleared IBM's HackerRank challenge and competed in a 24-hour national hackathon, demonstrating problem-solving, teamwork, and innovation.
CodeFest, Arka Jain University — Secured **2nd place** during the Engineering Day competition.
Earned a **Certificate in Database Management Systems** through NPTEL.
Organized "Hack Horizon 2K25" — A university-level hackathon fostering innovation,collaboration among tech enthusiasts.

Technical Skills

Programming Languages: C/C++, Python, JavaScript, HTML, CSS
Libraries & Tools: NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, OpenCV
Frameworks: React.js, Node.js, Express.js,TensorFlow, Keras, Deep Learning
Developer Tools: VS Code, Git, GitHub, Jupyter Notebook
Databases: MySQL , MongoDB
Cloud & Platforms: Google Cloud Platform (GCP), GitHub Pages
Coursework: Data Structures and Algorithms, Object-Oriented Programming, DBMS, Software Engineering
Interests: Machine Learning, Deep Learning, Web Development

Strengths

Analytical Thinking — Skilled in identifying patterns, interpreting data, and solving problems logically.
Critical Reasoning — Strong ability to assess complex issues and make effective decisions.
Teamwork & Collaboration — Excellent at working within diverse teams to achieve shared goals.
Time Management — Efficient in prioritizing tasks and meeting deadlines consistently.
Professional Attitude — Maintain an optimistic and adaptable mindset fostering continuous learning.

Leadership & Extracurricular Activities

Serving as Class Representative (CR) — Currently acting as a bridge between faculty and students, ensuring effective communication and academic coordination.
Community Lead, GDG on Campus AJU — Actively contributing to the growth of the developer community by organizing tech events, workshops, and peer-learning sessions.
Team Member, Gate Club, Arka Jain University — Engaged in organizing workshops and discussions to support GATE exam preparation and foster peer learning among members.
Club President, Code & Compute Society (CCS), Arka Jain University — Leading club operations, coordinating with faculty and university officials, and driving initiatives that promote coding culture and technical excellence on campus.