Ritesh Kumar

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Career Objective

An aspiring Software Engineer with strong analytical and problem-solving skills, eager to contribute to impactful real-world projects and build a successful career in software development. Committed to securing a challenging role in the IT industry where I can apply my technical expertise and dedication to drive innovation and support the growth of the organization.

Education

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

Experience

Backend Intern May 2024-July 2024
TechMantra Global *Remote*

- Gained in-depth understanding of SpringBoot for backend development, proficient in designing, deploying, and managing scalable SpringBoot applications.
- Implemented responsive UI using HTML, CSS, Bootstrap, and JavaScript to enhance user interaction and experience.

Machine Learning Intern May 2025–July 2025
NIT Jamshedpur *Offline*

- Worked on a machine learning project focused on steel surface defect detection using real-world industrial datasets.
- Utilized computer vision techniques such as edge detection, feature extraction for defect classification.
- Achieved 99.65% accuracy on a 6-class steel surface dataset and 99.72% accuracy on the NEU-DET dataset.

Projects

Age Gender Prediction | Python *GitHub Link*

* Developed a script that predicts age and gender using pre-trained models and the Haarcascade classifier for face detection.
* The cropped face images are fed into a deep learning model trained to predict both age and gender (male or female).

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

* Built a web application that allows users to search food recipes based on ingredients, using MealDB API.
* Developed RESTful APIs and integrated them with databases for enterprise-level solutions.

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

* Developed a Convolutional Neural Network (CNN) model to classify steel surface defects into six categories including crazing, inclusion, patches, pitted_surface, rolled-in_scale, scratches.
* Achieved 99.65% validation accuracy using an Attention-based Multi-Feature Fusion CNN (AMFF-CNN), outshining standard CNN models.
* Applied data augmentation and optimized training using batch normalization and dropout to improve model generalization.

Technical Skills

Programming Languages: C/C++, Python, JavaScript, HTML, CSS
Libraries & Tools: NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, OpenCV
Frameworks: SpringBoot, TensorFlow, Keras, Deep Learning
Developer Tools: VS Code, Git, GitHub, Jupyter Notebook
Databases: MySQL
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

Achievements

National Finalist, IBM Hackathon 2025 — Cleared IBM's HackerRank challenge and competed in a 24-hour national hackathon, demonstrating problem-solving, teamwork, and innovation.
Earned a **Certificate in Database Management Systems** through NPTEL.
Organized "Hack Horizon 2K25" — A university-level hackathon fostering innovation and collaboration among tech enthusiasts.

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 at 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 — Participate in club activities and help with events related to GATE preparation.