SUDHIR KUMAR

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Master of Technology
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Education

•NIT Durgapur *2024-2026*
Master of Technology in Computer Science and Engineering CGPA: 7.73

•Pranveer Singh Institute of Technology *2020-2024*
Bachelor of Technology in Computer Science and Engineering, Uttar Pradesh CGPA: 8.06

Experience

• **Backend Developer Intern – NIT Durgapur ERP Server** *December 2024-January 2025*
Backend Developer
– Developed and maintained backend functionalities for ERP systems using Django framework.
– Gained hands-on experience in database management, authentication, and ORM (Object-Relational Mapping).
– Collaborated with a team to optimize system performance and ensure seamless integration of backend services.
– Enhanced skills in debugging, code optimization, and implementing security best practices in web applications.

Personal Projects

•Non Invasive Anemia Detection
Current project
– Developing a device-based solution for anemia detection through palm and nail pallor analysis.
– Utilizing Convolutional Neural Networks (CNN) along with YOLO and DETR for advanced image processing to accurately analyze color changes (redness and yellowness) captured via smartphone video.
– Integrating real-time image analysis with video capture to assess anemia status based on color metrics under applied pressure.
– Focusing on creating a lightweight, efficient model suitable for mobile deployment to ensure accessibility and early diagnosis.
– Enhancing expertise in deep learning, computer vision, and optimizing models for real-time medical diagnostics, aiming to provide a non-invasive and cost-effective healthcare tool.

•Polyp Detection using Deep Learning
B.Tech Final year Project
– Developing a deep learning-based system for detecting cancerous tissues (polyps) in medical images.
– Implementing advanced neural networks to accurately identify and classify polyps, focusing on improving detection rates for early diagnosis of cancer.
– Utilizing image augmentation techniques to enhance the model's robustness and generalization across diverse datasets.
– Optimizing the deep learning model for high accuracy and efficiency, aiming for real-time analysis in clinical settings.
– Gaining proficiency in medical image processing, deep learning frameworks, and augmenting datasets to improve model performance in healthcare applications.

Technical Skills and Interests

Languages: C++,Python
Developer Tools: Git,Github,LINUX,VS Code,Kaggle
Frameworks/library: Django,React JS,Node Js
Databases: MySql,Postgres,Oracle
Certification: Coursera Accelerated Computer Science Fundamental(C++), Coursera Specialization for Machine,Infosys springboard Python certificate
Coursework: Data Structure and Algorithm, Object oriented Programming(OOPs),Operating System,DBMS
Areas of Interest: Machine learning, Backend development

Positions of Responsibility

• **Training & Placement Representative,** NIT Durgapur

• **Teaching Assistant,NIT Durgapur** Supported professors with lectures and grading, helped students during lab sessions, and handled various administrative tasks to enhance the learning experience.

Achievements

• 500+ questions solved on leetcode,Hackerrank,codechef

• 2024 GATE Qualified with 96.9 pecentile