

AYUSH SINGH RATHORE

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EDUCATION

SRM University | CGPA: 7.7
Bachelors of Technology in Computer Science and Engineering

Andhra Pradesh, India
October 2021 - June 2025

WORK EXPERIENCE

Software Developer & Machine Learning Intern |

Mumbai, India
October 2024 – November 2024

- Enhanced YOLOv8-based machine learning model for detecting body defects in tire X-ray images with improved labeling.
- Built a full-stack React.js and FastAPI web app that improved backend performance and reduced bottlenecks.
- Collaborated on reducing inspection time by 65% through optimized model serving and API pipeline enhancements.

Campus Automation Intern |

Andhra Pradesh, India
March 2023 – September 2023

- Led a campus automation initiative to digitize manual operations and reduce processing time by nearly 90%.
- Designed and implemented Outpass Booking System using React.js, JWT authentication, and modular architecture.
- Delivered three role-based user portals with intuitive UI to improve task flow and student satisfaction by 30%.

PROJECTS

Magic Chain |

- Developed a decentralized reward system to bring transparency and trust to modern loyalty programs using blockchain.
- Integrated React.js with Web3 for real-time wallet connection and blockchain-based redemption of loyalty tokens.
- Migrated system from monolithic to Kubernetes-based microservices architecture, enhancing scalability and deployment.

Scanalyze |

- Constructed a lightweight document scanning and matching tool using Node.js, TF-IDF, and cosine similarity with 80% accuracy.
- Implemented daily 20-credit limit and JWT authentication to ensure secure access and effective resource management.
- Programmed an analytics dashboard with detailed logs and reduced document matching latency by over 60%.

Health Lens |

- Fine-tuned CNN model (ResNet-18) for classifying Covid-19 and Pneumonia severity in chest X-ray images.
- Created a responsive frontend with React.js and FastAPI backend to manage predictions and X-ray uploads.
- Enabled user authentication and secure model access using Firebase and Google AI Studio integrations.

SKILLS

Programming Languages:	C/C++, Java, Python, JavaScript, TypeScript, SQL, HTML5/CSS3, Solidity
Technology & Frameworks:	Spring Boot, Node.js, RESTAPI, FastAPI, React.js, Tailwind CSS, Express, NLP, Langchain, Numpy, Pandas, Tensorflow, MongoDB, PostgreSQL, Redis
Development Tools:	Git, Postman, Docker, nginx, AWS(EC2, S3), Linux(Ubuntu), CI/CD, YOLOv8
Academic Coursework:	Data Structures & Algorithms, Database Management Systems, Operating Systems, Computer Networks, System Design

ACHIEVEMENTS

- ETH-India Hackathon:** Won ETHIndia track prize by building a decentralized microfinance platform enabling secure lending for 200+ unbanked users.
- Mentored 100+ students towards making contributions in blockchain as part of a QS-awarded, student-run community.
- Achieved 100% merit-based scholarship with a perfect score on the university's entrance examination, resulting in a prestigious award covering full tuition fees at SRM University.
- Awarded a gold medal on the 9th University Research Day for final year project on deepfake media detection using blockchain with zkSync Layer-2 rollups.
- Served on University Academic Council; boosted engagement by 40% and redesigned curriculum across 3 schools, ensuring 100% implementation and alignment with industry standards.