

# 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

**CheckExplore Technologies |**

Mumbai, India

**Software Developer Intern**

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 web application using React.js and FastAPI, enhancing backend performance and improving system reliability.
- Collaborated on reducing inspection time through optimized model serving and API pipeline enhancements.

**SRM University |**

Andhra Pradesh, India

**Campus Automation Intern**

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/UX to improve task flow and student satisfaction.

## PROJECTS

**Scanalyze |** GitHub Repository

- Engineered a high-performance document analysis tool using Node.js to scan and match text with 80% accuracy by leveraging TF-IDF and cosine similarity algorithms.
- Implemented a secure, session-based user system with JWT authentication and rate-limiting (20-credit daily limit) to manage resources and prevent abuse.
- Developed a comprehensive analytics dashboard that provided detailed logging, successfully reducing document matching latency by over 60%.

**ChainVoice |** Live Demo

- Architected a scalable microservices-based financing platform using Node.js, FastAPI, and PostgreSQL to process and manage invoices for over 100 SMEs.
- Optimized the data ingestion pipeline, improving OCR accuracy for invoice processing and enabling real-time financial transactions.
- Deployed the distributed application on AWS (EC2, S3), ensuring high availability and secure, role-based workflows for both SME and investor stakeholders.

**ZkDetect |** Live Demo

- Developed a high-throughput media verification system to detect deepfakes with a strong emphasis on user privacy and data integrity.
- Built a Python-based FastAPI microservice to integrate a computer vision model (CViT2), capable of processing and generating unique hashes for 1,000+ media files.
- Engineered a full-stack portal with React.js and Node.js for tracking media file predictions and managing a 55% confidence threshold for verification.

## SKILLS

**Programming Languages:** C/C++, Java, Python, JavaScript, TypeScript, SQL, HTML5/CSS3

**Technology & Frameworks:** SpringBoot, Node.js, FastAPI, React.js, Tailwind CSS, express, NLP, Langchain  
Tensorflow, MongoDB, PostgreSQL, Redis

**Development Tools:** Git, Postman, Docker, nginx, AWS(EC2, S3), Azure, Linux(Ubuntu)

**Academic Coursework:** Data Structures & Algorithms, Database Management Systems, Operating Systems,  
Computer Networks

## 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.
- Served on University Academic Council; boosted engagement by 40% and redesigned curriculum across 3 schools, ensuring 100% implementation and alignment with industry standards.