

# 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 |**   
CheckExplore

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 |**   
SRM University

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

**ChainVoice | Live Demo**

- Built a decentralized invoice financing platform enabling 100+ SMEs to tokenize invoices on Solana.
- Designed microservices with Node.js, FastAPI, and PostgreSQL, improving OCR accuracy by 15% and enabling real-time token minting.
- Deployed on AWS t2.micro, supporting up to 20 concurrent users with secure role-based workflows for SMEs and investors.

**ZkDetect | Live Demo**

- Revolutionized deepfake detection by implementing zkProofs for privacy-preserving media verification without exposing content.
- Integrated CViT2 model with FastAPI to generate pHash, CID, and store verification proofs on Ethereum L2 and Solana blockchain.
- Developed React.js and Node.js portal to track 1,000+ media files, with prediction outcomes using a 55% confidence threshold.

**Scanalyze | GitHub Repository**

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

## SKILLS

|                                     |  |
|-------------------------------------|--|
| <b>Programming Languages:</b>       | C/C++ , Java, Python, JavaScript, TypeScript, SQL, HTML5/CSS3, Solidity  |
| <b>Technology &amp; Frameworks:</b> | Spring Boot, Node.js, RESTAPI, FastAPI, React.js, Tailwind CSS, Express, NLP, Langchain, Numpy, Pandas, Tensorflow, MongoDB, PostgreSQL, Redis |
| <b>Development Tools:</b>           | Git, Postman, Docker, nginx, AWS(EC2, S3), Linux(Ubuntu), CI/CD, YOLOv8  |
| <b>Academic Coursework:</b>         | 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.