

# RITHICK BHARATHWAJ S

Ambitious and Self-Motivated Computer Science Engineering Undergraduate  
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## EDUCATION

**Anna University**, Chennai Institute of Technology  
Bachelor of Engineering in Computer Science and Engineering

**Aug 2023 – Present**  
Cumulative GPA: 8.5/10

## EXPERIENCE

**AI Research Intern**, Saint-Gobain – *Chennai, Tamil Nadu*

**Jul 2025 – Aug 2025**

- Collaborated with the Smart Devices team to design and implement a YOLO-based object detection system, enhancing factory safety and real-time incident monitoring.
- Led the end-to-end data pipeline: annotated and preprocessed 40,000+ images, trained models, and tuned hyperparameters to ensure high accuracy and robustness.
- Evaluated model performance under varying lighting conditions and object color changes, identifying factors affecting real-world deployment and Optimized training strategies to improve detection efficiency, reliability, and scalability for industrial environments.

**Research Intern**, Chennai Institute of Technology – *Chennai, Tamil Nadu*

**May 2025 - Jul 2024**

- Worked on drone-based object detection, focusing on model building and optimization for efficient edge deployment; a patent was filed for the framework.
- Developed an environmental acoustic testing system to detect sound patterns and generate sustainability scores.
- Contributed to two journal papers (under review) through experimentation, result analysis, and technical writing.
- Applied Python, EfficientNet, CNN, React JS, and Streamlit for model development and deployment.

**Backend Developer Intern**, Anjane Technologies – *Chennai, Tamil Nadu*

**Nov 2024 - Jan 2025**

- Contributed to backend feature development for a React Native mobile app in a startup environment.
- Implemented automated testing with Jest, enhancing test coverage and code reliability.
- Managed CI/CD pipelines using Docker and GitHub Actions for efficient deployment.
- Worked in an agile team, adapting to cross-functional tasks and ensuring smooth delivery.

## PROJECTS

**AI Governance & Bias Mitigation Platform (Python, GitHub Actions, Streamlit)**

**Apr 2024 – May 2025**

- Developed an AI framework focused on monitoring and governing other AI systems to ensure ethical and compliant operations.
- Implemented innovative bias mitigation techniques to eliminate AI hallucinations caused by data and model bias.
- Automated continuous auditing and real-time alerting to detect and address AI decision anomalies.

**Drone-Based Object Detection Optimization Framework (React JS, PyTorch, ONNX, YOLOv5)**

**Apr 2025 – May 2025**

- Designed an optimization pipeline combining pruning, quantization, and knowledge distillation for drone-based object detection.
- Supported multiple detection models and deployment on resource-constrained aerial devices.
- Created a simulation and testing environment to evaluate model performance and efficiency, enhancing real-time detection with minimal compute overhead.

**Pan-India Deforestation & Fire Detection System (React JS, Streamlit, CNN, Python)**

**Apr 2024 – May 2025**

- Built a CNN-based system for detecting deforestation and forest fires using color and image parsing.
- Developed a full-stack web app with Streamlit, enabling real-time insights through an interactive interface.
- Analyzed pan-India satellite datasets to monitor forest coverage trends.
- Tools & Technologies: React JS, Streamlit, CNN, Python.

## SKILLS

- Technical Skills:** C++, Python, JavaScript, Java, MongoDB, PostgreSQL; React JS, Node JS, Express JS, Next JS; GitHub, Postman, Firebase, GitHub Actions (CI/CD), Cursor, CSA ServiceNow Certified.
- Soft Skills:** Project Management, Agile Leadership, Problem Solving, Public Speaking, Presentation, Talent Acquisition.

## ACHIEVEMENTS

- Leader of College **Music Club** (event planning & team collaboration) | Experienced **public speaker** in panels and debates | 3th place nationally in **Tech Hackathon 2025** (St. Joseph College) | Solved **400+ LeetCode problems** (1650 rating) and participated in 50+ competitive programming contests.